WILLIAMS

TOOLS OF INDUSTRY

by

WILLIAMS

SUPERIOR DROP-FORGED TOOLS

REFERENCE CATALOGUE LIBRARY MAR 16 1944

Williams (J. H.) & Co., Buffalo, N.Y.

Tools of industry

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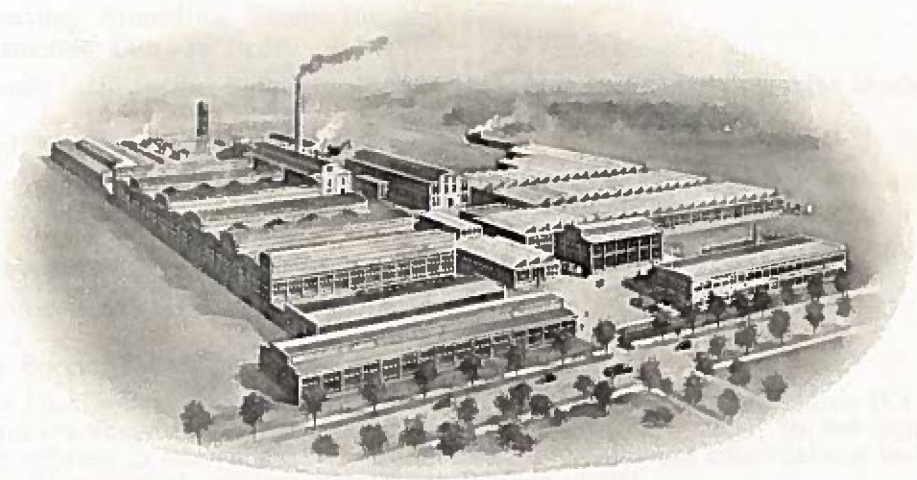


NOTICE—**Due to the National Emergency and Critical Metal Shortage we must reserve the right to substitute both finishes and materials for those listed in this catalog without notice. Discontinued lines will be so marked. Individual discontinued items will be deleted and their reference retained in the Numerical Price Index.**

WILLIAMS

SUPERIOR DROP-FORGED TOOLS

SUPERIOR DROP-FORGINGS AND DROP-FORGED TOOLS



WORKS, WAREHOUSE AND OFFICE — BUFFALO, N. Y.

J. H. WILLIAMS & CO.

ESTABLISHED 1882 — INCORPORATED JULY 1, 1895

GENERAL OFFICES AND FACTORY
400 VULCAN STREET BUFFALO, NEW YORK

SALES AND EXPORT OFFICE:
225 Lafayette St., NEW YORK

DISTRICT SALES OFFICE AND WAREHOUSE:
117 North Jefferson Street, Chicago

PRINTED IN U.S.A.

Industrial Edition

This Industrial Catalog supersedes all previous issues, which are hereby withdrawn. A separate Catalog covering additional Automotive Service tools is available on request. All Prices are subject to change without notice.

Cuts Illustrating Our Goods

Furnished to customers; if desired, we will edit copy for printer and check proof.

Dimensions

Unless otherwise stated, all dimensions are in inches.

Electric Welding

We are prepared to electric-weld rounds up to and including 1 1/8 inch diameter; by this means we can supply several of our stock specialties, such as Rod Ends, with shanks of any reasonable length.

Heat-treating, Annealing, Tempering and Case-hardening Done to Order

We have ample facilities for handling work of this class and solicit inquiries therefor.

Chemical Analyses and Physical Tests

Our laboratories are thoroughly equipped and we offer their services for such analyzing as may be required.

Estimates for Special Forgings

Furnished on receipt of model or drawing and specifications, including quantity.

Dies for Special Forgings

Charges for Dies and Tools include only a portion of their cost. We assume the risk of breakage and the expense of repair and maintenance. Tools are fitted to our equipment and are not subject to surrender. When inactive for three years after date of last order, they may be discarded at our option, without further notice.

Guarantee

We guarantee all our product, whether Standard Stock goods, as described in this catalog, or Special Forgings made to order, to be free from imperfections of workmanship and material. We will gladly replace, without charge, any which prove defective, but we cannot allow claims for labor or damages.

Cable Address, "Willrich, New York"

Codes: Western Union, Lieber's Standard, Lieber's 5 Letter, "ABC" 5th Edition, Bentley's.

We are the sole makers of the following brands of drop-forged products:

VULCAN
SUPERRENCH
SUPERSOCKET

WILLIAMS
W
WILLIAMS

AGRIPPA
SUPERECTOR
SUPERJUSTABLE

J. H. Williams & Co., originated the first uniform line of fifteen-degree angle Wrenches, since generally adopted.

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LIST PRICES AND WEIGHTS OF WILLIAMS' WRENCHES

Arranged Numerically

Wrench No.	Page	Weight Each, Lbs.	List Price
CARBON STEEL			Finished
S-000	2	.03	$.28
S-00	2	.05	.28
00	2	.07	.28
0	2	.09	.30
1	2	.13	.36
2	2	.22	.44
3	2	.32	.52
4	2	.44	.64
5	2	.65	.76
6	2	.86	.92
6A	2	.86	.92
7	3	1.4	1.14
8	3	2.2	1.50
8A	3	2.2	1.50
9	3	2.7	2.30
10	3	3.7	3.20
10A	3	3.7	3.20
11	3	4.5	4.20
11A	3	4.5	4.20
12	3	6.	5.70
12A	3	6.	5.70
13	3	7.8	7.30
13A	3	7.8	7.30
14	3	9.9	9.20
14A	3	9.9	9.20
15	3	11.5	11.20
15A	3	11.5	11.20
16	3	14.3	13.40
16A	3	14.	13.40
16B	3	14.3	13.40
17	3	20.	20.50
17A	3	20.	20.50
18	3	28.6	29.50
18A	3	29.	29.50
19	3	34.5	42.00
19A	3	34.	42.00
19B	3	34.5	42.00
19C	3	34.	42.00
20	3	52.	62.00
20A	3	48.5	62.00
20B	3	52.	62.00
21A	3	95.	114.00
21B	3	94.	114.00
21C	3	85.5	114.00
22A	3	167.	204.00
22B	3	156.	204.00
21	4	.08	.34
22	4	.11	.42
23	4	.15	.42
24	4	.18	.50
25	4	.23	.50
25A	4	.23	.50
26	4	.30	.62
27	4	.34	.62
† 27C	..	.34	.62
28	4	.40	.74
† 28S	..	.40	.74
29	4	.49	.74
30	4	.61	.90
31	4	.76	.90
32	4	1.	1.10
33	4	1.	1.10
33A	4	1.	1.10
† 33C	..	1.	$ 1.10
34	4	1.4	1.36
34A	4	1.4	1.36
35	5	1.4	1.36
36	5	2.2	1.92
37	5	2.2	1.92
37A	5	2.	1.92
38	5	2.9	2.80
38A	5	2.9	2.80
39	5	2.9	2.80
39A	5	2.7	2.80
40	5	3.7	3.80
40A	5	3.7	3.80
41	5	3.5	3.80
42	5	5.5	5.30
42A	5	5.5	5.30
42B	5	5.5	5.30
43	5	5.5	5.30
44	5	7.8	7.20
44A	5	7.5	7.20
45	5	7.7	7.20
46	5	9.5	10.50
46A	5	9.5	10.50
47	5	9.5	10.50
47A	5	9.5	10.50
48	5	13.	14.00
49	5	12.7	14.00
50	5	13.2	18.00
50A	5	13.5	18.00
50B	5	13.2	18.00
51	5	14.7	19.80
52	5	16.7	22.00
53	5	18.	24.00
54	5	24.	28.50
54A	5	24.5	28.50
54B	5	24.	28.50
55	5	24.	31.00
56	5	31.	40.00
56A	5	31.5	40.00
57	5	34.	47.00
57A	5	38.7	56.00
57B	5	33.5	47.00
57C	5	39.	56.00
58	5	45.	62.00
58A	5	46.	62.00
59	5	42.5	62.00
59A	5	43.	62.00
60	5	48.	75.00
60A	5	48.5	75.00
61	5	66.	94.00
61A	5	66.5	94.00
62	5	66.5	94.00
62A	5	66.	94.00
63	5	95.	135.00
64	5	113.5	155.00
† 75	..	.20	.54
† 75A	..	.20	.54
† 75B	..	.20	.54
† 75C	..	.20	.54
† 77	..	.27	.68
† 77B	..	.27	.68
† 77C	..	.27	.68
† 77E	..	.27	.68
† 77S	..	.27	$.68
† 79	..	.46	.86
† 79A	..	.46	.86
† 79B	..	.46	.86
† 79C	..	.46	.86
† 79D	..	.46	.86
† 79E	..	.46	.86
† 79S	..	.46	.86
† 81	..	.72	1.10
† 81A	..	.72	1.10
† 81B	..	.72	1.10
† 81H	..	.72	1.10
† 83	..	1.	1.40
† 83A	..	1.	1.40
† 83B	..	1.	1.40
† 83C	..	1.	1.40
† 83D	..	1.	1.40
† 83J	..	1.	1.40
† 85	..	1.7	2.00
† 85B	..	1.7	2.00
† 85C	..	1.7	2.00
† 85J	..	1.7	2.00
† 85K	..	1.7	2.00
			Hard.
201	18	.28	.75
201A	18	.28	.75
201B	18	.28	.75
202	18	.28	.75
203	18	.52	.95
203A	18	.52	.95
204	18	.52	.95
204A	18	1.	.95
205	18	1.	1.20
205A	18	1.	1.20
206	18	1.	1.20
206B	18	1.	1.20
207	18	1.8	1.55
207A	18	1.8	1.55
208	18	2.7	2.05
208A	18	2.7	2.05
209	18	3.6	2.70
209A	18	3.6	2.70
210	18	5.1	3.60
210A	18	5.1	3.60
211	18	7.	5.30
211A	18	7.	5.30
212	18	7.	5.30
			Finished
260H	27	.04	.54
261A	26	.05	.60
261H	27	.05	.60
261J	27	.05	.60
262D	26	.15	.66
262H	27	.15	.66
263A	26	.17	.72
263D	26	.17	.72
263H	27	.17	.72
264A	26	.20	.78
265A	26	.32	.88
265D	26	.32	.88
265H	27	.32	.88
266D	26	.44	.96
266H	27	.44	.96
267A	26	.63	1.08
267D	26	.63	1.08
267H	27	.63	$ 1.08
† 267X	..	.63	1.08
268A	26	.75	1.20
268D	26	.75	1.20
268H	27	.75	1.20
268P	27	.75	1.20
269A	26	1.	1.38
269H	27	1.	1.38
270A	26	1.3	1.56
270D	26	1.3	1.56
270H	27	1.3	1.56
270S	26	1.3	1.56
† 270X	..	1.3	1.56
271A	26	1.7	1.80
271D	26	1.7	1.80
271H	27	1.7	1.80
† 271X	..	1.7	1.80
273A	26	2.7	2.40
273B	26	2.7	2.40
273H	27	2.7	2.40
274H	27	3.2	2.70
† 274X	..	3.2	2.70
275A	26	3.9	3.00
275D	26	3.9	3.00
276A	26	4.8	3.44
276B	26	4.8	3.44
276H	27	4.8	3.44
277A	26	6.1	3.90
277B	26	6.1	3.90
† 277N	..	6.1	3.90
277P	27	6.1	3.90
277X	27	6.1	3.90
278A	26	8.2	4.80
† 278P	..	8.2	4.80
279A	26	10.	6.30
279B	26	10.	6.30
† 279X	..	10.	6.30
280A	26	12.5	8.40
† 280X	..	12.5	8.40
			Hard.
367	20	1.5	1.50
367A	20	1.5	1.50
370	20	2.6	2.50
† 370A	..	2.6	2.50
370B	20	2.6	2.50
† 371	..	3.5	3.10
372A	20	3.5	3.10
373	20	3.5	3.10
† 374	..	4.1	3.70
376	20	4.1	3.70
377	20	4.8	4.50
378A	20	4.8	4.50
379	20	4.8	4.50
† 380	..	5.4	5.30
382	20	5.4	5.30
† 383	..	6.	6.30
383B	20	6.	6.30
† 385	..	6.	6.30
387	20	8.5	9.00
† 389	..	8.5	9.00
			Not Machd.
403	22	.13	.40
404	22	.26	.46
405	22	.34	.52
406	22	.50	.60

† Discontinued

LIST PRICES AND WEIGHTS OF WILLIAMS' WRENCHES

Arranged Numerically

"ALWAYS READY"

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
		Per Doz.	
1	30	4.4	$ 1.25
2	30	9.	1.55
† 2 1/2	..	20.	2.40
3	30	32.	3.50
† Bull T.	..	3.7	.75

"BULL DOG"

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
		Per Doz.	
1	30	3.	$.45
1 1/2	30	3.5	.75
1 3/4	30	7.5	1.10
2	30	9.	1.20
2 1/2	30	16.5	1.85
3	30	38.	2.80
3 1/2	30	48.	3.70
4	30	97.	5.60
4 1/2	30	128.	8.50
5	30	158.	11.00
Twin	30	13.5	1.90

ADJUSTABLE Carbon Wrenches

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
		Each	
† 4 in.	..	.13	$ 1.05
† 6 in.	..	.31	1.05
† 8 in.	..	.63	1.30
† 10 in.	..	1.06	1.60
† 12 in.	..	1.94	2.45
† 15 in.	..	4.19	3.30
† 18 in.	..	6.88	4.80

"SUPERJUSTABLE" Alloy Wrenches

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
4 in.	31	.09	$ 1.30
6 in.	31	.23	1.30
8 in.	31	.47	1.60
10 in.	31	.78	2.05
12 in.	31	1.41	2.95
15 in.	31	3.22	4.45
18 in.	31	6.	7.35

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
A-100	42	.25	$ 1.18
A-100A	42	.25	1.18
A-100B	42	.25	1.18
A-100C	42	.25	1.18
A-101	42	.31	1.27
† 1000	..	.07	.47
† 1000A	..	.09	.47
† 1001	..	.13	.56
† 1002	..	.22	.70
† 1003	..	.33	.85
† 1004	..	.48	1.05
† 1005	..	.65	1.25
† 1006	..	.92	1.50

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
† 1006A	..	.92	$ 1.50
† 1007	..	1.5	1.88
† 1008	..	2.2	2.50
† 1008A	..	2.2	2.50
† 1009	..	2.8	3.80
† 1010	..	3.9	5.30
† 1010A	..	3.9	5.30
† 1011	..	4.8	6.90
† 1011A	..	4.8	6.90
† 1012	..	6.2	9.40
† 1012A	..	6.2	9.40
† 1013	..	8.	12.15
† 1013A	..	8.	12.15
† 1014	..	10.	15.30
† 1014A	..	10.	15.30
1021S	32	.09	.58
1021	32	.09	.58
† 1022	..	.12	.69
1023	32	.12	.69
† 1024	..	.18	.82
1025	32	.18	.82
† 1025A	..	.18	.82
† 1026	..	.26	1.00
1027	32	.26	1.00
1027C	32	.26	1.00
† 1028	..	.37	1.24
1028S	32	.37	1.24
1029	32	.49	1.24
† 1030	..	.49	1.24
1031	32	.66	1.65
† 1032	..	.79	1.65
1033	32	.79	1.65
1033A	32	.79	1.65
1033C	32	.80	2.25
1034	32	1.2	2.25
1034A	32	1.2	2.25
1035	32	1.2	2.25
† 1036	..	1.7	3.15
1037	32	1.7	3.15
1037A	32	1.7	3.15
† 1038	..	2.1	4.90
1039	32	2.2	4.90
1039A	32	2.2	4.90
1040	32	2.2	4.90
1041	32	4.1	8.80
† 1075	..	.20	.93
† 1075A	..	.20	.93
† 1075B	..	.20	.93
† 1077	..	.27	1.18
† 1077B	..	.27	1.18
† 1077C	..	.27	1.18
† 1077E	..	.27	1.18
† 1077S	..	.27	1.18
† 1079	..	.46	1.45
† 1079A	..	.46	1.45
† 1079B	..	.46	1.45
† 1079C	..	.46	1.45
† 1079E	..	.46	1.45
† 1079S	..	.46	1.45
† 1081	..	.72	1.75
† 1081A	..	.72	1.75
† 1081B	..	.72	1.75
† 1081H	..	.72	1.75
† 1083	..	1.	2.30
† 1083A	..	1.	2.30

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
† 1083B	..	1.	$ 2.30
† 1083J	..	1.	2.30
† 1083K	..	1.	2.30
† 1085	..	1.7	3.30
† 1085B	..	1.7	3.30
† 1085C	..	1.7	3.30
† 1085H	..	1.7	3.30
† 1085J	..	1.7	3.30
† 1085K	..	1.7	3.30
1090	43	.09	.76
1090A	43	.09	.76
1090B	43	.09	.76
1090C	43	.09	.76
1090D	43	.19	.76
1090E	43	.19	.76
1090F	43	.19	.76
1092	43	.22	.82
1092B	43	.22	.82
1092C	43	.22	.82
1092D	43	.22	.82
1092F	43	.22	.82
1094	43	.34	.88
1094A	43	.38	.88
1094B	43	.38	.88
1094D	43	.34	.88
1094F	43	.34	.88
1094G	43	.34	.88
1096	43	.41	1.06
1096A	43	.47	1.06
† 1096B	..	.47	1.06
† 1096F	..	.41	1.06
1096H	43	.41	1.06
1106	44	.02	.65
1107	44	.02	.65
1108	44	.03	.72
1109	44	.03	.72
1112	44	.01	.65
1113	44	.01	.65
1114	44	.01	.65
1115	44	.01	.65
1116	44	.01	.65
1118	44	.03	.72
1120	44	.03	.72
1122	44	.04	.72
1124	44	.04	.72
1128	44	.07	.82
1132	44	.07	.82
1160	41	.08	1.15
1161	41	.09	1.18
1162	41	.13	1.28
1163	41	.21	1.40
1164	41	.28	1.55
1165	41	.38	1.70
1166	41	.5	1.85
1167	41	.75	2.00
1167A	41	.75	2.00
1168	41	1.13	2.15
1170	41	1.13	2.15
1171	41	1.75	2.40
1173	41	2.56	2.90
1176	41	3.88	3.45
1203	35	.52	1.43
1203A	35	.52	1.43
1205	35	1.	1.86
1205A	35	1.	1.86

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
1206B	35	1.	$ 1.86
1207	35	1.8	2.60
1207A	35	1.8	2.60
1208	35	2.7	3.50
1208A	35	2.7	3.50
1209	35	3.6	4.80
1209A	35	3.6	4.80
1210	35	5.1	6.80
1211	35	7.	10.00
1212	35	7.	10.00
† 1471	..	.28	3.05
† 1472	..	.54	3.50
† 1474	..	.94	4.85
1519	71	.08	1.85
1520	71	.57	2.20
† 1700	..	.09	.47
† 1701	..	.13	.56
† 1702	..	.22	.70
† 1703	..	.33	.85
† 1704	..	.48	1.05
† 1705	..	.65	1.25
† 1706	..	.92	1.50
† 1707	..	1.5	1.88
† 1709	..	2.7	3.80
1721	32	.08	.58
† 1722	..	.10	.58
1723	32	.10	.58
1723A	32	.11	.69
1725	32	.16	.82
† 1725A	..	.16	.82
1725B	32	.16	.82
† 1726	..	.26	1.00
1727	32	.26	1.00
† 1728	..	.37	1.24
1729	32	.37	1.24
† 1730	..	.49	1.24
1731	32	.6	1.65
1731A	32	.6	1.65
1731B	32	.6	1.65
1731BR	42	.98	4.30
† 1732	..	.79	1.65
† 1732A	..	.79	1.65
1733	32	.89	2.25
† 1734	..	1.2	2.25
1735	32	1.7	3.15
1735BR	42	1.86	5.75
† 1736	..	1.7	3.15
† 1736A	..	1.7	3.15
1737	32	1.7	3.15
† 1738	..	2.3	4.90
† 1739	..	2.3	4.90
† 1739A	..	2.3	4.90
† 1739B	..	2.3	4.90
1800A	37	.07	.61
1801	37	.11	.73
1802	37	.19	.86
1802A	37	.19	.86
1803	37	.31	1.00
1803A	37	.31	1.00
1804	37	.36	1.15
1804A	37	.36	1.15
1805	37	.45	1.40

† Discontinued

3-43

LIST PRICES AND WEIGHTS OF WILLIAMS' WRENCHES

ARRANGED NUMERICALLY

Wrench No.	Page	Weight Each, Lbs.	List Price
"SUPERRENCHES" (*Chrome-Molybdenum*)			Finished
1805A	37	.45	$ 1.40
1806	37	.68	1.70
1806A	37	.68	1.70
1806B	37	.68	1.70
1807	37	.89	2.05
1807A	37	.89	2.05
1808	37	1.5	2.60
1808A	37	1.5	2.60
1809	37	1.9	3.50
1809A	37	1.9	3.50
1810	37	2.9	4.70
1810A	37	2.9	4.70
1811	37	3.1	6.20
1811A	37	3.1	6.20
1812	37	4.3	8.05
H-1808	37	1.6	3.45
H-1808A	37	1.6	3.45
H-1809	37	2.3	4.65
H-1809A	37	2.3	4.65
H-1810	37	3.1	6.25
H-1810A	37	3.1	6.25
H-1811	37	3.8	8.25
H-1811A	37	3.8	8.25
H-1812	37	5.4	10.70
H-1813	37	6.5	13.55
H-1813A	37	6.5	13.55
H-1814	37	7.8	16.90
H-1815	37	10.3	28.05
H-1815A	37	10.3	28.05
H-1816	37	12.5	40.20
H-1817	37	16.3	55.00
H-1817A	37	16.3	55.00
1903	35	6.3	1.68
1903A	35	6.3	1.68
1905	35	1.2	2.25
1905A	35	1.2	2.25
1906	35	1.2	2.25
1907	35	1.9	3.15
1907A	35	1.9	3.15
1908	35	2.8	4.25
1908A	35	2.8	4.25
1909	35	4.1	5.85
1910	35	5.6	8.10
1911	35	7.9	12.25
1912	35	7.9	12.25
† 1999	..	1.2	4.00
2273	43	2.7	4.80
2274	43	3.9	5.40
2276	43	4.8	6.50
2277	43	6.1	7.75
2278	43	8.2	9.25
2279	43	10.	11.00
2280	43	12.5	14.00
2280A	43	12.5	14.00
6723	38	.08	.95
6725	38	.11	1.00
6725B	38	.14	1.00
6727	38	.18	1.10
† 7023	..	.16	.95
7025	38	.22	1.00
† 7029	..	.51	1.35
7033	38	.95	1.85
7033C	38	.95	1.85
† 7034	..	1.2	2.95

Wrench No.	Page	Weight Each, Lbs.	List Price
"SUPERRENCHES" (*Chrome-Molybdenum*)			Finished
† 7034A	..	1.3	$ 2.95
† 7037	..	1.8	3.30
† 7037A	..	2.4	3.80
7039	38	2.4	3.80
7039A	38	2.4	3.80
† 7721	..	.11	.80
7723	38	.13	.95
7725	38	.16	.95
7725B	38	.22	1.00
7727	38	.31	1.05
7727A	38	.48	1.20
7729	38	.48	1.20
7729A	38	.66	1.40
7731A	38	.66	1.40
7731B	38	.66	1.55
† 7733	..	.94	1.85
† 7735	..	2.	3.30
7735A	38	2.	3.30
7737	38	2.4	3.80
8021	39	.18	.80
† 8023	..	.37	.95
8025	39	.43	1.00
† 8029	..	.84	1.35
8033	39	1.3	1.65
8033C	39	1.14	1.85
† 8034	..	1.3	2.95
† 8034A	..	1.3	2.95
† 8037	..	2.1	3.30
† 8037A	..	3.3	3.80
8039	39	3.3	3.80
8039A	39	3.3	3.80
8041	39	5.79	4.95
8045	39	8.43	8.45
† 8048	..	9.88	9.80
8049	39	10.20	10.60
8053	39	14.65	16.25
† 8128	..	.27	1.35
† 8132	..	.39	1.45
† 8136	..	.5	1.55
† 8140	..	.61	1.65
† 8148	..	.86	1.80
8723	39	.26	.95
8725	39	.37	.95
8725B	39	.43	1.00
8727	39	.59	1.05
8727A	39	.8	1.20
8729	39	.8	1.20
8729A	39	1.	1.40
8731A	39	1.	1.40
8731B	39	1.	1.40
† 8733	..	1.4	1.85
† 8735	..	2.3	3.30
8735A	39	2.3	3.30
8807	36	2.15	4.75
8808	36	2.55	5.00
8809	36	3.63	6.10
8810	36	3.88	6.85
8811	36	5.38	7.15
8812	36	5.5	7.50
8813	36	7.18	9.35
8814	36	7.91	10.35
8815	36	9.60	11.50
8816	36	10.78	12.75
8909	36	3.84	4.40

Wrench No.	Page	Weight Each, Lbs.	List Price
"SUPERRENCHES" (*Chrome-Molybdenum*)			Finished
8910	36	4.64	$ 5.15
8911	36	5.88	5.50
8912	36	6.51	5.85
8913	36	8.41	7.65
8914	36	9.5	8.65
8924	45	.26	1.15
8928	45	.26	1.15
8930	45	.26	1.15
8932	45	.25	1.15
8934	45	.22	1.15
8936	45	.22	1.15
9723	39	.10	.95
9725	39	.19	1.00
9725B	39	.22	1.00
9727	39	.29	1.10
"SUPERRENCH" SETS (*Chrome-Molybdenum*)			Finished
106	42	1.82	$ *7.85
108	42	2.08	*10.30
† 1001	..	69.	154.60
1001A	62	69.	152.50
1025	33	2.7	*8.65
1140	44	.39	7.45
1140P	44	.5	9.30
1148P	44	.23	5.15
1168S	41	.8	5.40
1169S	41	1.69	8.95
† 1284	..	1.29	9.72
† 1284P	..	1.36	11.64
1285	49	1.29	9.70
1285P	49	1.36	11.55
† 1290	..	1.45	14.00
† 1290P	..	1.53	15.85
1291	49	1.45	14.00
1291P	49	1.53	15.85
† 1400	..	1.93	*12.10
† 1712	..	2.87	*30.20
6703	40	.41	3.05
† 7006	..	3.06	7.60
† 8005	..	4.29	8.10
† 8006	..	3.54	7.60
† 8105	41	2.01	7.80
9703	40	.7	3.05
"SUPERSOCKETS"			
MR-2	65	.025	.75
MR-4	65	.034	.75
MR-6	65	.063	.75
MR-8	65	.094	.75
MR-10	65	.125	.75
† S-10	..	1.8	2.70
S-10P	53	1.8	2.70
F-15	50	1.1	2.10
MR-15	65	.075	1.00
† S-15	..	2.	2.70
S-15P	53	2.	2.70
B-20A	50	.26	1.35
H-20A	58	2.7	3.30
NM-20A	48	.1	1.02
S-20A	53	.96	2.10
† S-20C	..	.9	2.25
NX-20B	60	4.4	2.10
NX-20C	60	1.36	3.00

Wrench No.	Page	Weight Each, Lbs.	List Price
"SUPERSOCKETS"			
† B-21	..	.56	$ 4.50
B-30	50	.5	1.50
SB-30	53	.14	1.02
B-40	50	.57	2.70
S-40	53	1.4	3.90
SB-40	53	.16	1.38
H-41	58	4.63	6.15
H-41B	58	2.	1.10
S-41	53	1.9	4.50
B-42	50	.61	2.70
B-42B	50	.15	.40
NM-42	48	.25	1.40
NM-42B	48	.08	.25
S-42	53	1.8	3.90
S-42B	53	.35	.60
B-50	50	.43	3.60
B-50A	50	.43	3.60
B-50B	50	.43	3.30
H-50	58	5.3	10.50
S-50	53	1.3	4.50
NX-50	60	6.3	16.20
B-51	50	.44	4.50
B-51A	50	.44	4.50
NM-51	48	.16	4.00
S-51	53	1.4	6.75
S-57	53	3.68	26.00
B-108	50	.16	1.08
NM-102	48	.06	.85
B-110	50	.23	1.08
H-110	58	1.5	2.70
NM-110	48	.34	1.44
† S-110	..	.81	1.80
S-110P	53	.53	1.20
NX-110	60	3.68	5.25
B-115	50	.44	1.20
H-115	58	2.8	3.30
NM-115	48	.17	1.08
† S-115	..	1.3	2.10
S-115P	53	1.0	1.65
NX-115	60	7.08	6.40
BM-130	50	.05	.90
BS-130	50	.13	1.02
HNX-130	58	1.69	1.50
HX-130	58	.59	1.50
MM-130	48	.02	.90
SH-130	53	.31	1.20
XX-130	60	1.17	3.30
BS-131	50	.15	1.02
MM-131	48	.03	.90
XX-131	60	.93	3.30
B-140	50	.13	2.46
H-140	58	1.2	7.50
S-140	53	.34	2.70
B-150	50	.03	.54
H-150	58	.27	1.20
HH-150	58	.2	1.50
MM-150	48	.03	.60
X-150	60	.54	1.68
XX-150	60	.53	2.70
NM-406	48	.025	.45
NM-407	48	.025	.45
NM-408	48	.025	.45

† Discontinued

*In Leatherette Roll

LIST PRICES AND WEIGHTS OF WILLIAMS' WRENCHES

ARRANGED NUMERICALLY

"ALWAYS READY"

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
		Per Doz.	
1	30	4.4	$ 1.25
2	30	9.	1.55
† 2 1/2	..	20.	2.40
3	30	32.	3.50
† Bull T.	..	37	.75

"BULL DOG"

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
		Per Doz.	
1	30	3.	$.45
1 1/2	30	3.5	.75
1 3/4	30	7.5	1.10
2	30	9.	1.20
2 1/2	30	16.5	1.85
3	30	38.	2.80
3 1/2	30	48.	3.70
4	30	97.	5.60
4 1/2	30	128.	8.50
5	30	158.	11.00
Twin	30	13.5	1.90

ADJUSTABLE Carbon Wrenches

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
		Each	
† 4 in.	..	.13	$ 1.05
† 6 in.	..	.31	1.05
† 8 in.	..	.63	1.30
† 10 in.	..	1.06	1.60
† 12 in.	..	1.94	2.45
† 15 in.	..	4.19	3.30
† 18 in.	..	6.88	4.80

"SUPERJUSTABLE" Alloy Wrenches

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
4 in.	31	.09	$ 1.30
6 in.	31	.23	1.30
8 in.	31	.47	1.60
10 in.	31	.78	2.05
12 in.	31	1.41	2.95
15 in.	31	3.22	4.45
18 in.	31	6.	7.35

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
A-100	42	.25	$ 1.18
A-100A	42	.25	1.18
A-100B	42	.25	1.18
A-100C	42	.25	1.18
A-101	42	.31	1.27
† 1000	..	.07	.47
† 1000A	..	.09	.47
† 1001	..	.13	.56
† 1002	..	.22	.70
† 1003	..	.33	.85
† 1004	..	.48	1.05
† 1005	..	.65	1.25
† 1006	..	.92	1.50

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
† 1006A	..	.92	$ 1.50
† 1007	..	1.5	1.88
† 1008	..	2.2	2.50
† 1008A	..	2.2	2.50
† 1009	..	2.8	3.80
† 1010	..	3.9	5.30
† 1010A	..	3.9	5.30
† 1011	..	4.8	6.90
† 1011A	..	4.8	6.90
† 1012	..	6.2	9.40
† 1012A	..	6.2	9.40
† 1013	..	8.	12.15
† 1013A	..	8.	12.15
† 1014	..	10.	15.30
† 1014A	..	10.	15.30
1021S	32	.09	.58
1021	32	.09	.58
† 1022	..	.12	.69
1023	32	.12	.69
† 1024	..	.18	.82
1025	32	.18	.82
† 1025A	..	.18	.82
† 1026	..	.26	1.00
1027	32	.26	1.00
1027C	32	.26	1.00
† 1028	..	.37	1.24
1028S	32	.37	1.24
1029	32	.49	1.24
† 1030	..	.49	1.24
1031	32	.66	1.65
† 1032	..	.79	1.65
1033	32	.79	1.65
1033A	32	.79	1.65
1033C	32	.89	2.25
1034	32	1.2	2.25
1034A	32	1.2	2.25
1035	32	1.2	2.25
† 1036	..	1.7	3.15
1037	32	1.7	3.15
1037A	32	1.7	3.15
† 1038	..	2.1	4.90
1039	32	2.2	4.90
1039A	32	2.2	4.90
1040	32	2.2	4.90
1041	32	4.1	8.80
† 1075	..	.20	.93
† 1075A	..	.20	.93
† 1075B	..	.20	.93
† 1077	..	.27	1.18
† 1077B	..	.27	1.18
† 1077C	..	.27	1.18
† 1077E	..	.27	1.18
† 1077S	..	.27	1.18
† 1079	..	.46	1.45
† 1079A	..	.46	1.45
† 1079B	..	.46	1.45
† 1079C	..	.46	1.45
† 1079E	..	.46	1.45
† 1079S	..	.46	1.45
† 1081	..	.72	1.75
† 1081A	..	.72	1.75
† 1081B	..	.72	1.75
† 1081H	..	.72	1.75
† 1083	..	1.	2.30
† 1083A	..	1.	2.30

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
† 1083B	..	1.	$ 2.30
† 1083J	..	1.	2.30
† 1083K	..	1.	2.30
† 1085	..	1.7	3.30
† 1085B	..	1.7	3.30
† 1085C	..	1.7	3.30
† 1085H	..	1.7	3.30
† 1085J	..	1.7	3.30
† 1085K	..	1.7	3.30
1090	43	.09	.76
1090A	43	.09	.76
1090B	43	.09	.76
1090C	43	.09	.76
1090D	43	.19	.76
1090E	43	.19	.76
1090F	43	.19	.76
1092	43	.22	.82
1092B	43	.22	.82
1092C	43	.22	.82
1092D	43	.22	.82
1092F	43	.22	.82
1094	43	.34	.88
1094A	43	.38	.88
1094B	43	.38	.88
1094D	43	.34	.88
1094F	43	.34	.88
1094G	43	.34	.88
1096	43	.41	1.06
1096A	43	.47	1.06
† 1096B	..	.47	1.06
† 1096F	..	.41	1.06
1096H	43	.41	1.06
1106	44	.02	.65
1107	44	.02	.65
1108	44	.03	.72
1109	44	.03	.72
1112	44	.01	.65
1113	44	.01	.65
1114	44	.01	.65
1115	44	.01	.65
1116	44	.01	.65
1118	44	.03	.72
1120	44	.03	.72
1122	44	.04	.72
1124	44	.04	.72
1128	44	.07	.82
1132	44	.07	.82
1160	41	.08	1.15
1161	41	.09	1.18
1162	41	.13	1.28
1163	41	.21	1.40
1164	41	.28	1.55
1165	41	.38	1.70
1166	41	.5	1.85
1167	41	.75	2.00
1167A	41	.75	2.00
1168	41	1.13	2.15
1170	41	1.13	2.15
1171	41	1.75	2.40
1173	41	2.56	2.90
1176	41	3.88	3.45
1203	35	.52	1.43
1203A	35	.52	1.43
1205	35	1.	1.86
1205A	35	1.	1.86

"SUPERRENCHES" (*Chrome-Molybdenum*)

Wrench No.	Page	Weight Each, Lbs.	List Price Finished
1206B	35	1.	$ 1.86
1207	35	1.8	2.60
1207A	35	1.8	2.60
1208	35	2.7	3.50
1208A	35	2.7	3.50
1209	35	3.6	4.80
1209A	35	3.6	4.80
1210	35	5.1	6.80
1211	35	7.	10.00
1212	35	7.	10.00
† 1471	..	.28	3.05
† 1472	..	.54	3.50
† 1474	..	.94	4.85
1519	71	.08	1.85
1520	71	.57	2.20
† 1700	..	.09	.47
† 1701	..	.13	.56
† 1702	..	.22	.70
† 1703	..	.33	.85
† 1704	..	.48	1.05
† 1705	..	.65	1.25
† 1706	..	.92	1.50
† 1707	..	1.5	1.88
† 1709	..	2.7	3.80
1721	32	.08	.58
† 1722	..	.10	.58
1723	32	.10	.58
1723A	32	.11	.69
1725	32	.16	.82
† 1725A	..	.16	.82
1725B	32	.16	.82
† 1726	..	.26	1.00
1727	32	.26	1.00
† 1728	..	.37	1.24
1729	32	.37	1.24
† 1730	..	.49	1.24
1731	32	.6	1.65
1731A	32	.6	1.65
1731B	32	.6	1.65
1731BR	42	.98	4.30
† 1732	..	.79	1.65
† 1732A	..	.79	1.65
1733	32	.80	2.25
† 1734	..	1.2	2.25
1735	32	1.7	3.15
1735BR	42	1.86	5.75
† 1736	..	1.7	3.15
† 1736A	..	1.7	3.15
1737	32	1.7	3.15
† 1738	..	2.3	4.90
† 1739	..	2.3	4.90
† 1739A	..	2.3	4.90
† 1739B	..	2.3	4.90
1800A	37	.07	.61
1801	37	.11	.73
1802	37	.19	.86
1802A	37	.19	.86
1803	37	.31	1.00
1803A	37	.31	1.00
1804	37	.36	1.15
1804A	37	.36	1.15
1805	37	.45	1.40

† Discontinued

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LIST PRICES AND WEIGHTS OF WILLIAMS' WRENCHES

Arranged Numerically

Wrench No.	Page	Weight Each, Lbs.	List Price
"SUPERRENCHES" (*Chrome-Molybdenum*)			Finished
1805A	37	.45	$ 1.40
1806	37	.68	1.70
1806A	37	.68	1.70
1806B	37	.68	1.70
1807	37	.89	2.05
1807A	37	.89	2.05
1808	37	1.5	2.60
1808A	37	1.5	2.60
1809	37	1.9	3.50
1809A	37	1.9	3.50
1810	37	2.9	4.70
1810A	37	2.9	4.70
1811	37	3.1	6.20
1811A	37	3.1	6.20
1812	37	4.3	8.05
H-1808	37	1.6	3.45
H-1808A	37	1.6	3.45
H-1809	37	2.3	4.65
H-1809A	37	2.3	4.65
H-1810	37	3.1	6.25
H-1810A	37	3.1	6.25
H-1811	37	3.8	8.25
H-1811A	37	3.8	8.25
H-1812	37	5.4	10.70
H-1813	37	6.5	13.55
H-1813A	37	6.5	13.55
H-1814	37	7.8	16.90
H-1815	37	10.3	28.05
H-1815A	37	10.3	28.05
H-1816	37	12.5	40.20
H-1817	37	16.3	55.00
H-1817A	37	16.3	55.00
1903	35	6.3	1.68
1903A	35	6.3	1.68
1905	35	1.2	2.25
1905A	35	1.2	2.25
1906	35	1.2	2.25
1907	35	1.9	3.15
1907A	35	1.9	3.15
1908	35	2.8	4.25
1908A	35	2.8	4.25
1909	35	4.1	5.85
1910	35	5.6	8.10
1911	35	7.9	12.25
1912	35	7.9	12.25
† 1999	..	1.2	4.00
2273	43	2.7	4.80
2274	43	3.9	5.40
2276	43	4.8	6.50
2277	43	6.1	7.75
2278	43	8.2	9.25
2279	43	10.	11.00
2280	43	12.5	14.00
2280A	43	12.5	14.00
6723	38	.08	.95
6725	38	.11	1.00
6725B	38	.14	1.00
6727	38	.18	1.10
† 7023	..	.16	.95
7025	38	.22	1.00
† 7029	..	.51	1.35
7033	38	.95	1.85
7033C	38	.95	1.85
† 7034	..	1.2	2.95
"SUPERRENCHES" (*Chrome-Molybdenum*)			Finished
† 7034A	..	1.3	$ 2.95
† 7037	..	1.8	3.30
† 7037A	..	2.4	3.80
7039	38	2.4	3.80
7039A	38	2.4	3.80
† 7721	..	.11	.80
7723	38	.13	.95
7725	38	.16	.95
7725B	38	.22	1.00
7727	38	.31	1.05
7727A	38	.48	1.20
7729	38	.48	1.20
7729A	38	.66	1.40
7731A	38	.66	1.40
7731B	38	.66	1.55
† 7733	..	.94	1.85
† 7735	..	2.	3.30
7735A	38	2.	3.30
7737	38	2.4	3.80
8021	39	.18	.80
† 8023	..	.37	.95
8025	39	.43	1.00
† 8029	..	.84	1.35
8033	39	1.3	1.65
8033C	39	1.14	1.85
† 8034	..	1.3	2.95
† 8034A	..	1.3	2.95
† 8037	..	2.1	3.30
† 8037A	..	3.3	3.80
8039	39	3.3	3.80
8039A	39	3.3	3.80
8041	39	5.79	4.95
8045	39	8.43	8.45
† 8048	..	9.88	9.80
8049	39	10.20	10.60
8053	39	14.65	16.25
† 8128	..	.27	1.35
† 8132	..	.39	1.45
† 8136	..	.5	1.55
† 8140	..	.61	1.65
† 8148	..	.86	1.80
8723	39	.26	.95
8725	39	.37	.95
8725B	39	.43	1.00
8727	39	.59	1.05
8727A	39	.8	1.20
8729	39	.8	1.20
8729A	39	1.	1.40
8731A	39	1.	1.40
8731B	39	1.	1.40
† 8733	..	1.4	1.85
† 8735	..	2.3	3.30
8735A	39	2.3	3.30
8807	36	2.15	4.75
8808	36	2.55	5.00
8809	36	3.63	6.10
8810	36	3.88	6.85
8811	36	5.38	7.15
8812	36	5.5	7.50
8813	36	7.18	9.35
8814	36	7.91	10.35
8815	36	9.60	11.50
8816	36	10.78	12.75
8909	36	3.84	4.40
"SUPERRENCHES" (*Chrome-Molybdenum*)			Finished
8910	36	4.64	$ 5.15
8911	36	5.88	5.50
8912	36	6.51	5.85
8913	36	8.41	7.65
8914	36	9.5	8.65
8924	45	.26	1.15
8928	45	.26	1.15
8930	45	.26	1.15
8932	45	.25	1.15
8934	45	.22	1.15
8936	45	.22	1.15
9723	39	.10	.95
9725	39	.19	1.00
9725B	39	.22	1.00
9727	39	.29	1.10
"SUPERRENCH" SETS (*Chrome-Molybdenum*)			Finished
106	42	1.82	$ *7.85
108	42	2.08	*10.30
† 1001	..	69.	154.60
1001A	62	69.	152.50
1025	33	2.7	*8.65
1140	44	.39	7.45
1140P	44	.5	9.30
1148P	44	.23	5.15
1168S	41	.8	5.40
1169S	41	1.69	8.95
† 1284	..	1.20	9.72
† 1284P	..	1.36	11.64
1285	49	1.29	9.70
1285P	49	1.36	11.55
† 1290	..	1.45	14.00
† 1290P	..	1.53	15.85
1291	49	1.45	14.00
1291P	49	1.53	15.85
† 1400	..	1.93	*12.10
† 1712	..	2.87	*30.20
6703	40	.41	3.05
† 7006	..	3.06	7.60
† 8005	..	4.29	8.10
† 8006	..	3.54	7.60
† 8105	41	2.91	7.80
9703	40	.7	3.05
"SUPERSOCKETS"			
MR-2	65	.025	.75
MR-4	65	.034	.75
MR-6	65	.063	.75
MR-8	65	.094	.75
MR-10	65	.125	.75
† S-10	..	1.8	2.70
S-10P	53	1.8	2.70
F-15	50	1.1	2.10
MR-15	65	.075	1.00
† S-15	..	2.	2.70
S-15P	53	2.	2.70
B-20A	50	.26	1.35
H-20A	58	2.7	3.30
NM-20A	48	.1	1.02
S-20A	53	.96	2.10
† S-20C	..	.9	2.25
NX-20B	60	4.4	2.10
NX-20C	60	1.30	3.00
"SUPERSOCKETS"			
† B-21	..	.56	$ 4.50
B-30	50	.5	1.50
SB-30	53	.14	1.02
B-40	50	.57	2.70
S-40	53	1.4	3.90
SB-40	53	.16	1.38
H-41	58	4.63	6.15
H-41B	58	2.	1.10
S-41	53	1.9	4.50
B-42	50	.61	2.70
B-42B	50	.15	.40
NM-42	48	.25	1.40
NM-42B	48	.08	.25
S-42	53	1.8	3.90
S-42B	53	.35	.60
B-50	50	.43	3.60
B-50A	50	.43	3.60
B-50B	50	.43	3.30
H-50	58	5.3	10.50
S-50	53	1.3	4.50
NX-50	60	6.3	16.20
B-51	50	.44	4.50
B-51A	50	.44	4.50
NM-51	48	.16	4.00
S-51	53	1.4	6.75
S-57	53	3.68	26.00
B-108	50	.16	1.08
NM-102	48	.06	.85
B-110	50	.23	1.08
H-110	58	1.5	2.70
NM-110	48	.34	1.44
† S-110	..	.81	1.80
S-110P	53	.53	1.20
NX-110	60	3.68	5.25
B-115	50	.44	1.20
H-115	58	2.8	3.30
NM-115	48	.17	1.08
† S-115	..	1.3	2.10
S-115P	53	1.0	1.65
NX-115	60	7.08	6.40
BM-130	50	.05	.90
BS-130	50	.13	1.02
HNX-130	58	1.69	1.50
HX-130	58	.59	1.50
MM-130	48	.02	.90
SH-130	53	.31	1.20
XX-130	60	1.17	3.30
BS-131	50	.15	1.02
MM-131	48	.03	.90
XX-131	60	.93	3.30
B-140	50	.13	2.46
H-140	58	1.2	7.50
S-140	53	.34	2.70
B-150	50	.03	.54
H-150	58	.27	1.20
HH-150	58	.2	1.50
MM-150	48	.03	.60
X-150	60	.54	1.68
XX-150	60	.53	2.70
NM-406	48	.025	.45
NM-407	48	.025	.45
NM-408	48	.025	.45

† Discontinued

*In Leatherette Roll

LIST PRICES AND WEIGHTS OF WILLIAMS' WRENCHES

ARRANGED NUMERICALLY

Wrench No.	Page	Weight Each, Lbs.	List Price
"SUPERSOCKETS"			
S-410	52	.14	$.72
S-412	52	.14	.72
S-414	52	.14	.72
S-416	52	.17	.72
S-418	52	.23	.72
S-0418	52	.14	.90
S-420	52	.3	.72
S-422	52	.32	.84
S-424	52	.38	.90
S-428	52	.53	.90
S-432	52	.65	1.20
AM-604	69	.031	.60
AM-605	69	.031	.60
AM-606	69	.031	.60
NM-606	48	.014	.45
AM-607	69	.032	.60
NM-607	48	.018	.45
AB-608	69	.056	.75
† B-608	..	.04	.72
NM-608	48	.019	.45
NM-609	48	.019	.45
AB-610	69	.063	.75
AS-612	69	.113	.85
AS-616	69	.125	.85
AS-618	69	.138	.85
AS-620	69	.144	.85
NX-682	60	6.33	12.00
NX-688	60	6.7	16.50
NM-810	48	.031	.45
NM-812	48	.05	.45
BD-814	50	.094	.85
BD-816	50	.131	.85
BD-818	50	.138	.92
BD-820	50	.175	.92
† B-1210	..	.04	.72
NM-1210	48	.022	.45
† B-1211	..	.05	.72
NM-1211	48	.025	.45
B-1212	50	.05	.72
NM-1212	48	.031	.45
B-1214	50	.05	.72
BD-1214	50	.10	.77
BU-1214	50	.09	2.30
NM-1214	48	.038	.45
ST-1214	52	.11	.72
B-1216	50	.06	.72
BD-1216	50	.10	.77
BU-1216	50	.09	2.30
SD-1216	52	.27	1.14
ST-1216	52	.12	.72
B-1218	50	.07	.72
BD-1218	50	.125	.77
BU-1218	50	.10	2.55
SD-1218	52	.26	1.14
SD-1218S	52	.24	1.30
SF-1218	52	.13	1.00
ST-1218	52	.11	.72
ST-1219	52	.13	.72
"SUPERSOCKETS"			
B-1220	50	.09	$.72
BD-1220	50	.163	.77
BU-1220	50	.11	2.55
SD-1220	52	.26	1.26
ST-1220	52	.14	.72
† ST-1221	..	.14	.72
B-1222	50	.11	.84
BD-1222	50	.218	.90
SD-1222	52	.26	1.26
ST-1222	52	.16	.84
B-1224	50	.13	.84
BD-1224	50	.215	1.00
SD-1224	52	.37	1.26
ST-1224	52	.19	.90
ST-1225	52	.21	.90
SD-1226	52	.37	1.26
ST-1226	52	.24	.90
† H-1228	..	.41	1.08
SD-1228	52	.45	1.26
SD-1228T	52	.29	1.26
ST-1228	52	.28	.90
H-1230	58	.4	1.08
HD-1230	58	.75	1.62
SD-1230	52	.51	1.38
ST-1230	52	.32	1.08
† H-1231	..	.43	1.08
ST-1231	52	.34	1.08
H-1232	58	.5	1.08
SD-1232	52	.52	1.50
ST-1232	52	.38	1.08
H-1234	58	.51	1.32
HD-1234	58	.90	1.86
S-1234	52	.39	1.20
NX-1234	60	1.13	1.80
H-1236	58	.58	1.38
S-1236	52	.43	1.32
SD-1236	52	.74	1.68
NX-1236	60	1.15	1.80
H-1238	58	.69	1.38
S-1238	52	.51	1.38
H-1240	58	.67	1.56
HD-1240	58	1.2	2.28
S-1240	52	.53	1.44
NX-1240	60	1.23	1.98
H-1242	58	.78	1.56
H-1244	58	.78	1.56
NX-1244	60	1.29	2.10
H-1246	58	.88	1.86
HD-1246	58	1.6	2.52
NX-1246	60	1.33	2.22
H-1248	58	1.	1.86
NX-1248	60	1.43	2.70
H-1252	58	1.	2.16
NX-1252	60	1.85	3.00
H-1254	58	1.3	2.70
H-1256	58	1.3	2.70
"SUPERSOCKETS"			
H-1258	58	1.9	$ 2.95
NX-1258	60	2.14	4.20
H-1260	58	1.9	2.95
H-1264	58	2.1	3.50
NX-1264	60	2.42	4.80
† H-1266	..	2.5	4.10
† H-1268	..	2.6	4.40
† H-1270	..	2.6	4.70
NX-1270	60	3.03	6.30
† H-1272	..	2.5	5.30
NX-1276	60	3.64	7.50
NX-1280	60	3.16	10.50
"SUPERSOCKET" SETS			
5	51	6.5	$ 24.40
† 6	..	7.25	27.65
6-B	51	7.25	25.50
† 7	..	9.5	46.10
7-A	51	9.5	43.95
R-19	65	2.75	18.50
20	55	23.	42.20
21	54	6.75	14.70
21R	54	4.88	16.45
26	55	25.5	49.60
30	56	25.5	48.85
36	56	27.75	55.85
50	59	28.75	48.54
51	59	22.25	30.54
55	57	43.5	87.85
55A	57	41.5	83.35
76	61	53.	77.00
81	61	32.	44.25
AL-100	69	10.	25.00
† AL-101	..	10.	27.75
† 300	..	44.	114.30
† 600	..	130.	243.30
† 1001	..	69.	154.60
1001-A	62	69	152.50
† 1268	..	1.06	6.96
† 1268P	..	1.26	8.88
1269	49	1.06	6.95
1269P	49	1.26	8.80
1269PR	49	1.5	12.90
† 1284	..	1.29	9.72
† 1284P	..	1.36	11.64
1285	49	1.29	9.70
1285P	49	1.36	11.55
1286PR	49	2.06	18.50
† 1290	..	1.45	14.00
† 1290P	..	1.53	15.85
1291	49	1.45	14.00
1291P	49	1.53	15.85
1292PR	49	2.41	23.80
"SUPERECTOR" Wrenches and Sockets			
E1-24	46	9.3	$ 12.60
E1-36	46	12.8	19.80
E2-36	46	20.9	25.20
E2-48	46	24.	32.40
E3-48	46	40.6	50.40
"SUPERECTOR" Wrenches and Sockets			
E1-416	46	2.6	$4.85
E1-417	46	2.6	4.85
E1-418	46	2.6	4.90
E1-420	46	2.6	5.00
E1-421	46	2.6	5.10
E1-423	46	2.8	5.20
E1-424	46	2.8	5.30
E1-426	46	2.9	5.40
E1-429	46	3.3	5.65
E1-430	46	3.3	5.75
E1-432	46	3.5	5.90
E1-435	46	4.	6.20
E1-436	46	4.	6.40
E1-617	46	2.6	4.85
E1-618	46	2.6	4.90
E1-620	46	2.5	5.00
E1-621	46	2.5	5.10
E1-623	46	2.5	5.20
E1-624	46	2.5	5.30
E1-626	46	2.6	5.40
E1-627	46	2.6	5.50
E1-628	46	2.6	5.60
E1-629	46	2.8	5.65
E1-630	46	2.8	5.75
E1-632	46	3.2	5.90
E1-633	46	3.2	6.00
E1-635	46	3.6	6.20
E1-636	46	3.6	6.40
E2-432	46	5.7	9.70
E2-435	46	6.	10.00
E2-438	46	6.5	10.40
E2-441	46	7.1	10.80
E2-444	46	7.9	11.30
E2-447	46	9.	11.85
E2-450	46	10.	12.40
E2-632	46	5.5	9.70
E2-635	46	5.8	10.00
E2-638	46	6.3	10.40
E2-641	46	6.7	10.80
E2-644	46	7.2	11.30
E2-647	46	8.	11.85
E2-650	46	9.	12.40
E3-450	46	16.	20.10
E3-456	46	17.	20.80
E3-462	46	18.3	21.60
E3-468	46	19.9	22.55
E3-474	46	22.5	23.65
E3-650	46	14.9	20.10
E3-656	46	15.6	20.80
E3-662	46	16.8	21.60
E3-668	46	17.9	22.55
E3-674	46	18.4	23.65
"SUPERECTOR" SET			
E1-12	46	42.	$ 71.25

† Discontinued

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LIST PRICES AND WEIGHTS OF WILLIAMS' TOOLS

No.	Page	Weight Each, Lbs.	List Price
PLIERS			
† 5	71	.27	$.65
† 6	71	.44	.70
† 8	71	.53	.90
† 10	71	.88	1.25
† 36	71	.5	.90
† 46	71	.34	1.25
† 57	71	.47	2.30
† 76	71	.25	2.40
† 77	71	.30	2.70
1519	71	.08	1.85
1520	71	.57	2.20
SCREW DRIVERS			
† WP-1	72	.06	$.60
† WP-2	72	.19	.65
† WP-3	72	.31	.75
† 4	72	.19	1.05
† CP-4	72	.55	2.30
† WP-4	72	.53	.95
† 6	72	.38	1.40
† 6B	72	.5	1.55
† 8	72	.50	1.75
† 12	72	.75	2.10
† 24	72	.19	.95
† 26	72	.33	1.30
† 28	72	.53	1.60
† 32	72	.60	1.95
† 43	72	.09	.75
† 46	72	.14	.95
† 50	72	.17	1.10
† 52	72	.03	.32
† 62	72	.14	.65
† WP-62	72	.09	.55
PUNCHES			
† P-4	73	.10	$.54
† P-6	73	.25	62
† P-8	73	.53	.77
† P-13	73	.28	.62
† P-14	73	.41	.77
† P-25	73	.22	.75
† P-26	73	.41	.85
† P-30	73	.13	.45
† P-40	73	.16	.45
CHISELS			
† C-8	73	.06	$.54
† C-12	73	.16	.62
† C-16	73	.31	.73
† C-20	73	.5	.85
† C-24	73	.78	1.05
† C-36	73	1.63	1.65
† C-422	73	1.44	1.65
WHEEL PULLER			
† 5	..	1.69	$12.25
CHAIN PIPE TONGS			
0	79	2.	$ 5.00
1	79	5.5	7.00
2	79	10.	10.00
3	79	17.	14.00
3 1/2	79	26.	18.00
4	79	34.	22.00
5	79	54.	36.00
10	80	2.	5.00
11	80	5.75	7.00
12	80	10.	10.00
13	80	17.	14.00
13 1/2	80	24.	18.00
14	80	31.	22.00
15	80	52.	36.00
16	80	137.	80.00

No.	Page	Weight Each, Lbs.	List Price
CHAIN PIPE TONGS			
A-10	81	2.	$ 7.50
A-11	81	5.75	10.50
A-12	81	10.	15.00
A-13	81	17.	21.00
A-13 1/2	81	24.	27.00
A-14	81	31.	33.00
A-15	81	52.	54.00
A-16	81	137.	120.00
23	82	19.	14.00
23 1/2	82	28.	18.00
24	82	41.	22.00
25	82	65.	36.00
30	82	2.	5.00
31	82	5.75	7.00
32	82	10.	10.00
33	82	17.	14.00
33 1/2	82	24.	18.00
34	82	31.	22.00
35	82	52.	36.00
123 1/2	82	20.75	20.00
124	82	30.25	26.00
125	82	44.75	36.00
CHAIN PIPE VISES			
1	77	4.	$ 7.00
V-1	75	35.	31.00
2	77	10.	15.00
3	77	18.	27.00
4	77	30.	36.00
11	76	7.	10.00
12	76	15.	19.00
† 21	..	5.75	9.60
TOOL POSTS			
5	84	.44	$.82
10	84	.81	1.05
20	84	2.1	1.40
23	84	1.6	1.65
28	84	2.1	1.90
30	84	3.	2.10
40	84	4.7	3.05
50	84	6.6	3.95
60	84	13.6	7.95
TOOL POST WEDGES			
5	84	.06	$.27
10	84	.13	.30
11	84	.09	.30
15	84	.16	.33
18	84	.18	.34
20	84	.22	.35
30	84	.25	.40
40	84	.44	.47
50	84	.63	.56
65	84	.75	.61
TOOL POST RINGS			
5	84	.25	$.33
10	84	.5	.47
11	84	.5	.52
14	84	.75	.75
18	84	1.3	.94
20	84	.94	.82
30	84	1.3	1.00
40	84	1.8	1.15
60	84	2.2	1.50

No.	Page	Weight Each, Lbs.	List Price
TOOL HOLDERS			
000L	87	.25	$2.70
000R	87	.25	2.70
000S	87	.25	2.70
00K	94	.55	5.65
00L	87	.46	2.70
00R	87	.46	2.70
00S	87	.43	2.70
0K	94	.65	6.00
0L	87	.73	2.85
0R	87	.73	2.85
0S	87	.69	2.85
1K	94	1.6	6.75
1L	87	1.3	3.25
† FT-1L	..	1.22	4.40
T-0L	86	.5	3.20
T-1L	86	1.22	3.60
1R	87	1.3	3.25
† FT-1R	..	1.22	4.40
T-0R	86	.5	3.20
T-1R	86	1.22	3.60
1S	87	1.1	3.25
† FT-1S	..	1.19	4.40
T-0S	86	.5	3.20
T-1S	86	1.19	3.60
2	90	14.7	§ 27.00
2K	94	2.25	8.00
2L	87	2.5	4.00
† FT-2L	..	2.06	5.40
T-2L	86	2.06	4.50
2R	87	2.5	4.00
† FT-2R	..	2.06	5.40
T-2R	86	2.06	4.50
2S	87	2.1	4.00
† FT-2S	..	2	5.40
T-2S	86	2.	4.50
3	90	23.8	§ 37.50
3L	87	3.4	5.40
† FT-3L	..	3.22	7.20
T-3L	86	3.22	6.00
3R	87	3.4	5.40
† FT-3R	..	3.22	7.20
T-3R	86	3.22	6.00
3S	87	3.3	5 40
† FT-3S	..	3.06	7.20
T-3S	86	3.06	6.00
4	90	39.	§ 60.00
4L	87	4.9	6.90
† FT-4L	..	4.5	9.20
T-4L	86	4.5	7.60
4R	87	4.9	6.90
† FT-4R	..	4 5	9.20
T-4R	86	4 5	7.60
4S	87	4.7	6.90
† FT-4S	..	4.38	9.20
T-4S	86	4.38	7.60
5	90	69.	§ 90.00
5L	87	7.8	9.75
† FT-5L	..	7.55	12.90
T-5L	86	7.55	10.80
5R	87	7.8	9.75
† FT-5R	..	7.55	12.90
T-5R	86	7.55	10.80
5S	87	7.2	9.75
† FT-5S	..	7.44	12.90
T-5S	86	7.44	10.80
6L	87	12.	13.50
6R	87	12.	13.50
6S	87	12.	13.50
11K	94	1.9	9.00
12K	94	2.25	10.50
15	90	.63	4.15
16	90	1.2	5.25
17	90	2.6	6.75
N-020R	93	.42	* 2.85
N-20R	93	.74	* 3.00

No.	Page	Weight Each, Lbs.	List Price
TOOL HOLDERS			
NS-20	92	.94	$4.50
N-21R	93	1.4	* 3.60
NS-21	92	1.31	5.40
N-22R	93	2.1	* 4.50
NS-22	92	2.17	6.75
N-23R	93	3.4	* 6.00
NS-23	92	3.94	9.00
N-24R	93	4.4	* 7.50
N-25R	93	4.6	* 8.60
N-030L	93	.46	* 2.85
N-030R	93	.46	* 2.85
N-30L	93	.75	* 3.00
N-30R	93	75	* 3.00
NS-30R	92	90	4.50
NS-30RA	92	.85	4.50
N-31L	93	1.4	* 3.60
N-31R	93	1.4	* 3.60
NS-31R	92	1.47	5.40
N-32L	93	2.3	* 4.50
N-32R	93	2.3	* 4.50
NS-32R	92	2.38	6.75
33L	93	3.7	* 6.00
N-33R	93	3.7	* 6.00
NS-33R	92	3.81	9.00
34L	93	4.9	* 7.50
N-34R	93	4.9	* 7.50
35L	93	5.	* 8.60
N-35R	93	5.	* 8.60
C-050	89	.5	4.15
C-50	89	.6	4.15
S-50	89	1.	4.15
C-51	89	1.1	5.00
C-52	89	2.2	6.40
S-51	89	1.6	5.00
S-52	89	2.7	6.40
080	91	1.3	§ 4.90
80	91	2.2	§ 4.90
81	91	3.1	§ 5.80
82	91	6.7	§ 7.65
83	91	10.3	§10.85
91	96	2.1	4.65
92	96	3.4	6.00
93	96	6.	7.85
94	96	12.	12.40
95	96	20.6	21.75
96	96	35.	39.00
97	96	57.	57.00
0200L	88	.59	2.70
0200R	88	.59	2.70
0200S	88	.57	2.70
200L	88	1.1	2.85
200R	88	1.1	2.85
200S	88	1.0	2.85
201L	88	2.	3.25
201R	88	2.	3.25
201S	88	2.	3.25
202L	88	3.2	4.00
202R	88	3.2	4.00
202S	88	3.2	4.00
204L	88	3.2	6.90
204R	88	3.2	6.90
204S	88	3.2	6.90
TOOL HOLDER SETS			
00 to 4	97		
LATHE DOGS			
1	100	.32	$ 1.00
2	100	.56	1.10
3	100	1.	1.20
4	100	1.5	1.40
5	100	1.9	1.70
6	100	2.6	2.00

†Discontinued

*Complete with Cut-Off Blade; with Side Blade, extra.

§Complete with Sleeve Bar; with Plain Bar, less.

LIST PRICES AND WEIGHTS OF WILLIAMS' TOOLS

No.	Page	Weight Each, Lbs.	List Price
LATHE DOGS			
7	100	3.3	$ 2.40
8	100	4.1	2.80
9	100	5.4	3.60
10	100	7.	4.60
11	100	10.	6.80
12	100	12.	9.00
13	100	20.	16.00
21	102	.19	1.00
22	102	.34	1.10
23	102	.66	1.20
24	102	1.06	1.40
25	102	1.5	1.70
26	102	2.	2.00
27	102	2.7	2.40
28	102	3.5	2.80
29	102	4.6	3.60
30	102	6.	4.60
31	102	9.	6.00
32	102	11.	9.00
33	102	19.5	16.00
61	105	.53	3.00
62	105	.98	4.00
63	105	1.8	5.00
64	105	3.	7.00
112	101	15.	16.00
113	101	21.5	24.00
114	101	30.7	34.00
132	103	13.	16.00
133	103	20.5	24.00
134	103	28.	34.00
MILLING MACHINE DOGS			
42	104	.75	$ 1.10
43	104	.93	1.20
44	104	1.2	1.40
45	104	1.3	1.70
46	104	1.6	2.00
47	104	1.8	2.40
48	104	2.1	2.80
CLAMPS			
0	106	.25	$ 1.00
1	106	.75	1.50
1 1/2	106	1.6	2.50
2	106	3.1	3.50
3	106	6.5	5.00
4	106	9.7	6.50
5	106	12.3	8.00
6	106	16.5	10.00
8	106	24.	14.00
10	106	28.	19.00
12	106	40.	25.00
30	112	.37	.40
35	112	.62	.50
40	112	.87	.70
44	113	.83	.60
46	113	1.6	1.00
48	113	3.3	1.70
54	112	1.	.60
56	112	1.8	1.00
58	112	3.8	1.70
59	112	6.6	2.80
54A	112	1.1	1.10
56A	112	2.	1.70
58A	112	3.9	2.60
59A	112	7.1	4.00
64	113	1.	.60
66	113	2.	1.00
68	113	4.	1.70
74	112	1.	.60
76	112	2.	1.00
78	112	4.2	1.70
103	107	2.63	4.00
104	107	4.25	4.50

No.	Page	Weight Each, Lbs.	List Price
CLAMPS			
106	107	5.5	$ 5.50
108	107	7.	6.50
110	107	7.5	7.50
112	107	9.5	8.50
115	107	13.5	11.00
118	107	17.	14.00
			Plain Screw
201	110	.25	1.00
202	110	.33	1.30
203	110	.56	1.70
204	110	.9	2.50
			Swivel Screw
201	110	.25	1.50
202	110	.33	1.80
203	110	.56	2.30
204	110	.9	3.20
301	111	.6	3.00
302	111	1.4	4.00
303	111	1.9	5.00
304	111	3.1	6.00
			Standard Finish
402	109	1.13	1.50
403	109	1.5	1.80
404	109	2.25	2.20
406	109	3.75	3.00
408	109	5.5	4.00
410	109	8.25	5.00
412	109	12.5	6.50
			Spatter-Resisting
402-S	109	1.13	1.80
403-S	109	1.5	2.25
404-S	109	2.25	2.90
406-S	109	3.75	3.75
408-S	109	5.5	4.75
410-S	109	8.25	6.00
412-S	109	12.5	7.50
†502	...	.75	1.50
†503	...	1.25	1.80
†504	...	2.	2.20
†506	...	3.	3.00
†508	...	4.5	4.00
†510	...	6.	5.00
†512	...	7.5	6.50
BALANCE HANDLES			
434	114	1.3	$ 4.90
439	114	2.8	5.90
512	114	.25	2.30
516	114	.56	2.45
520	114	.75	2.65
522	114	1.1	2.90
525	114	1.3	3.30
529	114	1.6	3.85
CRANK HANDLES			
00	115	.38	$ 1.85
0	115	.43	2.00
1	115	.78	2.30
2	115	.75	2.30
4	115	1.	2.65
6	115	1.1	3.15
8	115	1.2	3.85
10	115	1.6	4.75
12	115	2.4	5.80
14	115	2.5	6.50
16	115	3.2	8.15
MACHINE HANDLES			
00	113	.06	$.21
0	113	.09	.21
1	113	.13	.23
2	113	.22	.29
3	113	.31	.36
4	113	.37	.46
5	113	.62	.57
6	113	1.3	.69
7	113	1.7	.84
11	113	.22	.29
13	113	.43	.46
15	113	.75	.57
16	113	1.1	.69

No.	Page	Weight Each, Lbs.	List Price
HOIST HOOKS			
2	118	.59	$.32
3	118	.78	.37
4	118	1.	.44
5	118	1.6	.58
6	118	2.1	.85
7	118	3.	1.25
8	118	4.4	1.80
9	118	6.2	2.45
10	118	8.	3.20
11	118	10.	4.10
12	118	13.3	5.60
13	118	17.8	7.80
14	118	26.7	12.00
15	118	44.	23.00
15A	118	46.	39.00
16	118	75.	60.00
16A	118	76.	70.00
22	119	.53	.36
23	119	.75	.43
24	119	1.1	.53
25	119	1.5	.73
26	119	2.2	1.05
27	119	3.	1.50
28	119	4.4	2.10
29	119	6.	2.85
30	119	8.	3.70
31	119	10.3	4.70
32	119	14.	6.40
33	119	20.	9.40
34	119	31.5	18.50
35	119	51.7	35.00
36	119	86.	86.00
36A	119	88.	100.00
***EYE BOLTS**			
3	120	.17	$.16
4	120	.23	.18
5	120	.33	.21
6	120	.5	.25
7	120	.68	.32
8	120	1.1	.42
9	120	1.5	.55
10	120	2.1	.74
11	120	3.	1.04
12	120	4.2	1.45
14	120	6.8	2.50
15	120	10.9	3.75
16	120	15.1	5.30
17	120	31.	8.80
21	121	.05	.14
22	121	.1	.15
23	121	.2	.16
24	121	.26	.18
25	121	.4	.21
26	121	.54	.25
27	121	.72	.32
28	121	1.1	.42
29	121	1.8	.55
30	121	2.4	.74
31	121	3.5	1.04
32	121	4.6	1.45
34	121	7.5	2.50
35	121	12.5	3.75
36	121	18.	5.30

No.	Page	Weight Each, Lbs.	List Price
ROD ENDS			
OB to 4E	123		
5A to 19A	123		

THUMB NUTS AND SCREWS

Thumb Nut Blanks "A"
Page 116

For Bolt; Size	Weight, Lbs. Per 100
1/8	.62
3/16	1.3
1/4	2.3
5/16	4.
3/8	6.2
7/16	9.1
1/2	12.7
9/16	16.2
5/8	22.5
3/4	37.

Thumb Nut Blanks "B"
Page 116

1/8	.94
3/16	1.6
1/4	2.8
5/16	4.2
3/8	6.8
7/16	9.5
1/2	13.7
9/16	15.3
5/8	21.8
3/4	38.

Thumb Screw Blanks "C"
Pages 116 and 117

1/8 x 1	.94
1/8 x 2	1.3
1/8 x 3	1.6
1/8 x 4	2.1
3/16 x 1	2.1
3/16 x 2	3.4
3/16 x 3	4.3
3/16 x 4	5.6
1/4 x 1	4.
1/4 x 2	5.3
1/4 x 3	7.8
1/4 x 4	8.7
5/16 x 1	6.2
5/16 x 2	7.8
5/16 x 3	10.6
5/16 x 4	13.7
3/8 x 1	10.
3/8 x 2	12.5
3/8 x 3	16.
3/8 x 4	19.3
7/16 x 1	13.7
7/16 x 2	16.5
7/16 x 3	21.2
7/16 x 4	26.2
1/2 x 1	16.2
1/2 x 2	21.2
1/2 x 3	27.
1/2 x 4	32.5
9/16 x 1	21.
9/16 x 2	27.5
9/16 x 3	35.3
9/16 x 4	42.8
5/8 x 1	26.8
5/8 x 2	34.3
5/8 x 3	46.5
5/8 x 4	54.6
3/4 x 1	38.7
3/4 x 2	53.
3/4 x 3	66.
3/4 x 4	78.7

†Discontinued

*Threaded Eye Bolt prices; Blanks less.

3-43

STANDARD SPECIFICATIONS

FOR

WILLIAMS' +"SUPERIOR" DROP-FORGED WRENCHES

(Carbon-Steel)

Williams' "Superior" Wrenches, drop-forged from improved quality carbon steel and specially processed to Williams' exacting specifications, are approximately *twice as strong* as old-fashioned carbon steel wrenches. 50 patterns, over 1000 sizes.

Unfinished Wrench

"Maximum Utility with Minimum Finish"



Openings milled or broached, shanks smooth, sizes stamped on heads, hardened and shot-blasted.

Finished Wrench

"Maximum Finish at Medium Price"



Openings milled or broached, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads polished bright.

All openings are slightly larger than stated in tables to allow for clearance and variations.

Special Milling

On small quantities where special openings are specified, an extra charge will be made to cover the cost of "setting up" machines. No extra charge will be made for this special work when quantities are sufficient to cover the cost.

A sample Nut or Screw, as gauge, should accompany orders.

Special Wrenches

made to order. Prices will be quoted upon receipt of models, or drawings and specifications stating kind of finish (see above description) and quantity required.

When Ordering

please use numbers and state whether requirements are for American Standard HEAVY (U.S.S.), American Standard LIGHT (S.A.E.), American Standard REGULAR, Whitworth Standard or m/m openings and condition of finish desired.

Finished Wrenches will be supplied, unless otherwise specified.

+ REGISTERED TRADE MARK

WILLIAMS' +"SUPERIOR" ENGINEERS' WRENCHES

(Carbon Steel)

15° Angle, Single Head

For Standard Nuts and Cap Screws

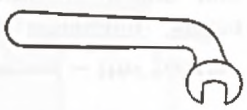


Unfinished are milled, size stamped on head, hardened and shot-blasted.

Finished are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

Wrenches of this style but with handle tapered will be furnished on orders for the larger sizes, beginning with No. 11.

Handles can be bent above heads at angles of 45° to 90° from opening, at an additional charge; see cut at right.



(Continued on opposite page)

No.	Nominal Opening	Amer.Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	Extreme Length Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
S 000	3/16				*Nos. 2 & 3	2 1/2	$.22	$.28	S 000
S 00	1/4				*No. 4	2 7/8	.22	.28	S 00
00	5/16	1/8	1/8		*Nos. 5 & 6	3 1/2	.22	.28	00
700	3/8		3/16		*No. 10	4	.24	.30	700
0	13/32	3/16				4	.24	.30	0
701	7/16		1/4	1/4	1/4 & *No. 12	4 5/8	.29	.36	701
1	1/2	1/4	5/16	5/16		4 5/8	.29	.36	1
702	9/16		3/8	3/8	5/16	5 1/2	.35	.44	702
2	19/32	5/16				5 1/2	.35	.44	2
703	5/8		7/16	7/16	3/8	6 3/8	.42	.52	703
3	11/16	3/8				6 3/8	.42	.52	3
704	3/4		1/2	1/2	7/16	7 1/4	.52	.64	704
4	25/32	7/16				7 1/4	.52	.64	4
705	13/16		9/16		1/2	8 1/8	.62	.76	705
5	7/8	1/2	5/8	9/16	9/16	8 1/8	.62	.76	5
6A	15/16			5/8		9 1/4	.76	.92	6A
6	31/32	9/16				9 1/4	.76	.92	6
706	1		3/4		5/8	9 1/4	.76	.92	706

*Amer. Std. Machine-Screw and Stove-Bolt Nuts.

Weights, pages F and H.

+ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 34)

10-42

WILLIAMS' + "SUPERIOR" ENGINEERS' WRENCHES

(Carbon Steel)

15° Angle, Single Head
For Standard Nuts and Cap Screws
(Continued)

Supplied in Whitworth Standard and Metric Measure; see page 124.

The following Finished Wrenches have hole of diameter given below in end of handle:

No.	17	17A	18	18A	19	19A	19B	19C	20	20A	20B	21A	21B	21C	22A	22B
Hole	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8	1	1	1	1-1/8	1-1/8	1-1/8	1-1/4	1-1/4"

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	Extreme Length, Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
7	1 1/16	5/8		3/4		10 1/2	$.96	$ 1.14	7
707	1 1/8		7/8		3/4	10 1/2	.96	1.14	707
8	1 1/4	3/4	(†1)	7/8		12	1.28	1.50	8
8A	1 5/16		1		7/8	12	1.28	1.50	8A
708A	1 3/8		(†1 1/8)			12	1.28	1.50	708A
9	1 7/16	7/8		1		13 1/2	2.00	2.30	9
709	1 1/2		1 1/8 (†1 1/4)		1	13 1/2	2.00	2.30	709
10	1 5/8	1		1 1/8		15	2.80	3.20	10
10A	1 11/16		1 1/4		1 1/8	15	2.80	3.20	10A
11	1 13/16	1 1/8		1 1/4		16 1/2	3.80	4.20	11
11A	1 7/8				1 1/4	16 1/2	3.80	4.20	11A
12	2	1 1/4		1 3/8		18 1/4	5.20	5.70	12
12A	2 1/16				1 3/8	18 1/4	5.20	5.70	12A
13	2 3/16	1 3/8		1 1/2		20	6.70	7.30	13
13A	2 1/4				1 1/2	20	6.70	7.30	13A
14	2 3/8	1 1/2				22	8.25	9.20	14
14A	2 7/16				1 5/8	22	8.25	9.20	14A
15	2 9/16	1 5/8				24	10.00	11.20	15
15A	2 5/8				1 3/4	24	10.00	11.20	15A
16	2 3/4	1 3/4				27	11.90	13.40	16
16B	2 13/16				1 7/8	27	11.90	13.40	16B
16A	2 15/16	1 7/8				27	11.90	13.40	16A
17A	3				2	30	18.70	20.50	17A
17	3 1/8	2				30	18.70	20.50	17
18A	3 3/8				2 1/4	34	27.50	29.50	18A
18	3 1/2	2 1/4				34	27.50	29.50	18
19B	3 3/4				2 1/2	38	39.75	42.00	19B
19	3 7/8	2 1/2				38	39.75	42.00	19
19C	4 1/8				2 3/4	38	39.75	42.00	19C
19A	4 1/4	2 3/4				38	39.75	42.00	19A
20B	4 1/2				3	42	58.50	62.00	20B
20	4 5/8	3				42	58.50	62.00	20
20A	5	3 1/4				42	58.50	62.00	20A
21A	5 3/8	3 1/2				47	107.00	114.00	21A
21B	5 3/4	3 3/4				47	107.00	114.00	21B
21C	6 1/8	4				47	107.00	114.00	21C
22A	6 7/8	4 1/2				52	192.00	204.00	22A
22B	7 5/8	5				52	192.00	204.00	22B

†Old style cap screw—now obsolete.

Weights, pages F and H.

+ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 34)

WILLIAMS' ✦ "SUPERIOR" ENGINEERS' WRENCHES

(Carbon Steel)

15° Angle, Double Head



Unfinished are milled, size stamped on head, hardened and shot-blasted.

Finished are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

Supplied in Whitworth Standard and Metric Measure; see pages 124 and 125.

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
721	5/16 & 3/8	1/8	1/8 & 3/16			4 1/8	$.28	$.34	721
21	5/16 & 13/32	1/8 & 3/16	1/8			4 1/8	.28	.34	21
722	5/16 & 7/16	1/8	1/8 & 1/4	1/4	1/4	4 1/2	.34	.42	722
22	5/16 & 1/2	1/8 & 1/4	1/8 & 5/16	5/16		4 1/2	.34	.42	22
723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4 1/2	.34	.42	723
723A	3/8 & 1/2	1/4	3/16 & 5/16	5/16		4 7/8	.34	.42	723A
23	13/32 & 1/2	3/16 & 1/4	5/16	5/16		4 7/8	.34	.42	23
24	13/32 & 19/32	3/16 & 5/16				5 1/4	.40	.50	24
725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5 1/4	.40	.50	725
725A	7/16 & 9/16		1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	5 1/4	.40	.50	725A
25A	7/16 & 5/8		1/4 & 7/16	1/4 & 7/16	1/4 & 3/8	5 3/4	.40	.50	25A
725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5 3/4	.40	.50	725B
25	1/2 & 19/32	1/4 & 5/16	5/16	5/16		5 3/4	.40	.50	25
726	1/2 & 5/8	1/4	5/16 & 7/16	5/16 & 7/16	3/8	6 1/4	.50	.62	726
26	1/2 & 11/16	1/4 & 3/8	5/16	5/16		6 1/4	.50	.62	26
727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6 1/4	.50	.62	727
27	19/32 & 11/16	5/16 & 3/8				6 3/4	.50	.62	27
728	9/16 & 3/4		3/8 & 1/2	3/8 & 1/2	5/16 & 7/16	7 1/4	.60	.74	728
28	19/32 & 25/32	5/16 & 7/16				7 1/4	.60	.74	28
729	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7 1/4	.60	.74	729
29	11/16 & 25/32	3/8 & 7/16				7 7/8	.60	.74	29
730	5/8 & 13/16		7/16 & 9/16	7/16	3/8 & 1/2	8 1/2	.74	.90	730
730A	5/8 & 7/8	1/2	7/16 & 5/8	7/16 & 9/16	3/8 & 9/16	8 1/2	.74	.90	730A
30	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	8 1/2	.74	.90	30
731	3/4 & 13/16		1/2 & 9/16	1/2	7/16 & 1/2	9 1/8	.74	.90	731
731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9 1/8	.74	.90	731A
31	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	9 1/8	.74	.90	31
731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	9 1/8	.74	.90	731B
32	25/32 & 31/32	7/16 & 9/16				10	.90	1.10	32
732	13/16 & 1		9/16 & 3/4		1/2 & 5/8	10	.90	1.10	732
33A	7/8 & 15/16	1/2	5/8	9/16 & 5/8	9/16	10	.90	1.10	33A
33	7/8 & 31/32	1/2 & 9/16	5/8	9/16	9/16	10	.90	1.10	33
733	7/8 & 1	1/2	5/8 & 3/4	9/16	9/16 & 5/8	10	.90	1.10	733
34	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	11	1.12	1.36	34
734	7/8 & 1 1/8	1/2	5/8 & 7/8	9/16	9/16 & 3/4	11	1.12	1.36	734
34A	15/16 & 1 1/16	5/8		5/8 & 3/4		11	1.12	1.36	34A

Sets, pages 28 and 29.

Weights, pages F and H.

✦ REGISTERED TRADE MARK

10-42

(Alloy Steel Wrenches, page 32)

WILLIAMS' + "SUPERIOR" ENGINEERS' WRENCHES

(Carbon Steel)

15° Angle, Double Head—*(Continued)*

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
35	31/32 & 1 1/16	9/16 & 5/8		3/4		11	$ 1.12	$ 1.36	35
735	1 & 1 1/8		3/4 & 7/8		5/8 & 3/4	11	1.12	1.36	735
36	31/32 & 1 1/4	9/16 & 3/4		7/8		12 3/8	1.62	1.92	36
736A	1 & 1 5/16		3/4 & 1		5/8 & 7/8	12 3/8	1.62	1.92	736A
37	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8		12 3/8	1.62	1.92	37
37A	1 1/8 & 1 5/16		7/8 & 1		3/4 & 7/8	12 3/8	1.62	1.92	37A
38	1 1/16 & 1 7/16	5/8 & 7/8		3/4 & 1		14	2.40	2.80	38
38A	1 1/8 & 1 1/2		7/8 & 1 1/8		3/4 & 1	14	2.40	2.80	38A
39	1 1/4 & 1 7/16	3/4 & 7/8		7/8 & 1		14	2.40	2.80	39
39A	1 5/16 & 1 1/2		1 & 1 1/8		7/8 & 1	14	2.40	2.80	39A
40	1 1/4 & 1 5/8	3/4 & 1		7/8 & 1 1/8		15 3/4	3.30	3.80	40
40A	1 5/16 & 1 11/16		1 & 1 1/4		7/8 & 1 1/8	15 3/4	3.30	3.80	40A
41	1 7/16 & 1 5/8	7/8 & 1		1 & 1 1/8		15 3/4	3.30	3.80	41
42	1 7/16 & 1 13/16	7/8 & 1 1/8		1 & 1 1/4		17	4.60	5.30	42
42A	1 1/2 & 1 11/16		1 1/8 & 1 1/4		1 & 1 1/8	17	4.60	5.30	42A
42B	1 1/2 & 1 7/8		1 1/8		1 & 1 1/4	17	4.60	5.30	42B
43	1 5/8 & 1 13/16	1 & 1 1/8		1 1/8 & 1 1/4		17	4.60	5.30	43
44	1 5/8 & 2	1 & 1 1/4		1 1/8 & 1 3/8		19	6.25	7.20	44
44A	1 11/16 & 1 7/8		1 1/4		1 1/8 & 1 1/4	19	6.25	7.20	44A
45	1 13/16 & 2	1 1/8 & 1 1/4		1 1/4 & 1 3/8		19	6.25	7.20	45
46A	1 11/16 & 2 1/4		1 1/4		1 1/8 & 1 1/2	21	9.30	10.50	46A
46	1 13/16 & 2 3/16	1 1/8 & 1 3/8		1 1/4 & 1 1/2		21	9.30	10.50	46
47A	1 7/8 & 2 1/4				1 1/4 & 1 1/2	21	9.30	10.50	47A
47	2 & 2 3/16	1 1/4 & 1 3/8		1 3/8 & 1 1/2		21	9.30	10.50	47
48	2 & 2 3/8	1 1/4 & 1 1/2		1 3/8		23	12.50	14.00	48
49	2 3/16 & 2 3/8	1 3/8 & 1 1/2		1 1/2		23	12.50	14.00	49
50A	1 7/8 & 2 5/8				1 1/4 & 1 3/4	25	16.25	18.00	50A
50	2 3/16 & 2 9/16	1 3/8 & 1 5/8		1 1/2		25	16.25	18.00	50
50B	2 1/4 & 2 5/8				1 1/2 & 1 3/4	25	16.25	18.00	50B
51	2 3/8 & 2 9/16	1 1/2 & 1 5/8				25	18.00	19.80	51
52	2 3/8 & 2 3/4	1 1/2 & 1 3/4				27	20.00	22.00	52
53	2 9/16 & 2 3/4	1 5/8 & 1 3/4				27	22.00	24.00	53
54A	2 1/4 & 3				1 1/2 & 2	30	26.25	28.50	54A
54	2 9/16 & 3 1/8	1 5/8 & 2				30	26.25	28.50	54
54B	2 5/8 & 3				1 3/4 & 2	30	26.25	28.50	54B
55	2 3/4 & 3 1/8	1 3/4 & 2				32	28.75	31.00	55
56A	2 5/8 & 3 3/8				1 3/4 & 2 1/4	34	37.50	40.00	56A
56	2 3/4 & 3 1/2	1 3/4 & 2 1/4				34	37.50	40.00	56
57B	3 & 3 3/8				2 & 2 1/4	36	44.25	47.00	57B
57	3 1/8 & 3 1/2	2 & 2 1/4				36	44.25	47.00	57
57A	3 1/8 & 3 7/8	2 & 2 1/2				38	53.00	56.00	57A
57C	3 & 3 3/4				2 & 2 1/2	38	53.00	56.00	57C
58A	3 3/8 & 3 3/4				2 1/4 & 2 1/2	38	59.00	62.00	58A
58	3 1/2 & 3 7/8	2 1/4 & 2 1/2				38	59.00	62.00	58
59A	3 3/8 & 4 1/8				2 1/4 & 2 3/4	38	59.00	62.00	59A
59	3 1/2 & 4 1/4	2 1/4 & 2 3/4				38	59.00	62.00	59
60A	3 3/4 & 4 1/8				2 1/2 & 2 3/4	40	71.00	75.00	60A
60	3 7/8 & 4 1/4	2 1/2 & 2 3/4				40	71.00	75.00	60
61A	3 3/4 & 4 1/2				2 1/2 & 3	43	89.00	94.00	61A
61	3 7/8 & 4 5/8	2 1/2 & 3				43	89.00	94.00	61
62A	4 1/8 & 4 1/2				2 3/4 & 3	43	89.00	94.00	62A
62	4 1/4 & 4 5/8	2 3/4 & 3				43	89.00	94.00	62
63	4 1/4 & 5 3/8	2 3/4 & 3 1/2				47	126.00	135.00	63
64	4 5/8 & 5 3/8	3 & 3 1/2				47	146.00	155.00	64

Sets, pages 28 and 29.

Weights, pages F and H.

+ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 32)

WILLIAMS' + "SUPERIOR" CHECK NUT, OR "THIN" WRENCHES

(Carbon Steel)

15° Angle, Single Head

For Check, Jam, or Lock Nuts, etc.



This class of Wrench is guaranteed amply strong for its intended purpose, but is not designed for severe service.

Supplied in Whitworth Standard and Metric Measure; see page 125.

These Wrenches are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

No.	Nominal Opening	Amer. Std. HEAVY Jam Nut (U.S.S.); Size Bolt	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Jam Nut; Size Bolt	Extreme Length, Approx.	Thickness Head	LIST PRICE Each Finished	No.
601A	7/16		1/4	1/4	4	5/32	$.36	601A
601	1/2	1/4	5/16		4	5/32	.36	601
602A	9/16		3/8	5/16	4 1/2	11/64	.44	602A
602	19/32	5/16			4 1/2	11/64	.44	602
603A	5/8		7/16	3/8	5 1/8	3/16	.52	603A
603	11/16	3/8			5 1/8	3/16	.52	603
604A	3/4		1/2	7/16	5 7/8	7/32	.64	604A
604	25/32	7/16			5 7/8	7/32	.64	604
605A	13/16			1/2	6 5/8	1/4	.76	605A
605	7/8	1/2	9/16	9/16	6 5/8	1/4	.76	605
606	31/32	9/16			7 1/2	9/32	.90	606
606B	1			5/8	7 1/2	9/32	.90	606B
607	1 1/16	5/8	3/4		8 1/2	5/16	1.08	607
607A	1 1/8			3/4	8 1/2	5/16	1.08	607A
608	1 1/4	3/4	7/8		10	3/8	1.36	608
608A	1 5/16			7/8	10	3/8	1.36	608A
609	1 7/16	7/8	1		11 5/8	7/16	1.84	609
609A	1 1/2			1	11 5/8	7/16	1.84	609A
610	1 5/8	1	1 1/8		13 1/4	1/2	2.60	610
610A	1 11/16			1 1/8	13 1/4	1/2	2.60	610A

Weights, page G.

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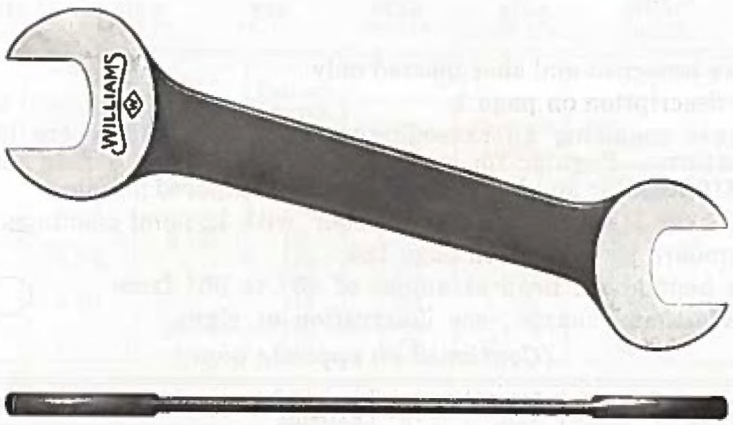
+ REGISTERED TRADE MARK

WILLIAMS' + "SUPERIOR" CHECK NUT, OR "THIN" WRENCHES

(Carbon Steel)

15° Angle, Double Head

For Check, Jam, or Lock Nuts, etc.



For description, see opposite page. Whitworth and Metric sizes, see page 126.

No.	Nominal Openings	Amer. Std. HEAVY Jam Nuts (U.S.S.); Size Bolts	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Jam Nuts; Size Bolts	Extreme Length, Approx.	Thickness Heads	LIST PRICE Each Finished	No.
623	13/32 & 1/2	3/16 & 1/4	5/16		4 5/8	5/32	$.50	623
623D	7/16 & 1/2	1/4	1/4 & 5/16	1/4	4 5/8	5/32	.50	623D
624A	7/16 & 9/16		1/4 & 3/8	1/4 & 5/16	4 3/4	5/32	.50	624A
625	1/2 & 19/32	1/4 & 5/16	5/16		4 3/4	5/32	.50	625
626	1/2 & 11/16	1/4 & 3/8	5/16		6	3/16	.64	626
626S	9/16 & 5/8		3/8 & 7/16	5/16 & 3/8	6	3/16	.64	626S
626X	9/16 & 11/16	3/8	3/8	5/16	6	3/16	.64	626X
627	19/32 & 11/16	5/16 & 3/8			6	3/16	.64	627
629D	5/8 & 3/4		7/16 & 1/2	3/8 & 7/16	6 3/4	3/16	.72	629D
629	11/16 & 25/32	3/8 & 7/16			6 3/4	3/16	.72	629
630	11/16 & 7/8	3/8 & 1/2	9/16	9/16	7 1/2	7/32	.80	630
630B	3/4 & 13/16		1/2	7/16 & 1/2	7 1/2	7/32	.80	630B
630E	3/4 & 7/8	1/2	1/2 & 9/16	7/16 & 9/16	7 1/2	7/32	.80	630E
631	25/32 & 7/8	7/16 & 1/2	9/16		7 1/2	7/32	.80	631
634	7/8 & 1 1/16	1/2 & 5/8	9/16 & 3/4	9/16	8 7/8	1/4	1.12	634
632X	15/16 & 1		5/8	5/8	8 7/8	1/4	1.12	632X
637	1 1/16 & 1 1/4	5/8 & 3/4	3/4 & 7/8		10 1/2	9/32	1.68	637
635G	1 1/8 & 1 1/4	3/4	7/8	3/4	10 1/2	9/32	1.68	635G
639	1 1/4 & 1 7/16	3/4 & 7/8	7/8 & 1		12 1/2	3/8	2.60	639
640	1 1/4 & 1 5/8	3/4 & 1	7/8 & 1 1/8		12 1/2	3/8	2.60	640
640A	1 5/16 & 1 1/2			7/8 & 1	12 1/2	3/8	2.60	640A

Weights, page G.

+ REGISTERED TRADE MARK

WILLIAMS' ✦ "SUPERIOR" HEX-BOX WRENCHES

(Carbon Steel)

REGULAR PATTERN—15° Angle



Unhardened are broached and shot-blasted only.

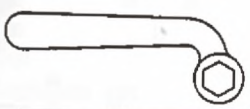
Finished—see description on page 1.

Designed for use requiring an exceedingly strong tool and where head clearance is limited. Two Patterns—Regular for general work, Heavy for severe service. Wrenches larger than No. 810 Regular and No. H809 Heavy have tapered handle.

These Wrenches can also be furnished, to order, with 12-point openings.

Whitworth Standard sizes start on page 124.

Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration at right.



(Continued on opposite page)

No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Extreme Length, Approx.	Head: Thickness	Head: Outside Diam.	LIST PRICE: Unhard.	LIST PRICE: Finished	No.
800	13/32	3/16	3/16			3 1/2	7/32	45/64	$.26	$.36	800
801A	7/16		1/4	1/4	1/4	4	17/64	27/32	.30	.42	801A
801	1/2	1/4	5/16			4	17/64	27/32	.30	.42	801
802A	9/16		3/8	3/8	5/16	4 7/8	5/16	63/64	.36	.50	802A
802	19/32	5/16				4 7/8	5/16	63/64	.36	.50	802
803A	5/8		7/16	7/16	3/8	5 7/8	23/64	1 9/64	.42	.58	803A
803	11/16	3/8				5 7/8	23/64	1 9/64	.42	.58	803
804A	3/4		1/2	1/2	7/16	6 7/8	11/32	1 3/8	.50	.70	804A
804	25/32	7/16				6 7/8	11/32	1 3/8	.50	.70	804
805A	13/16		9/16		1/2	7 3/4	25/64	1 1/2	.60	.84	805A
805	7/8	1/2	5/8	9/16	9/16	7 3/4	25/64	1 1/2	.60	.84	805
806	31/32	9/16				8 3/4	7/16	1 5/8	.72	1.00	806
806B	1		3/4		5/8	8 3/4	7/16	1 5/8	.72	1.00	806B
807	1 1/16	5/8		3/4		9 7/8	9/16	1 25/32	.90	1.24	807
807A	1 1/8		7/8		3/4	9 7/8	9/16	1 25/32	.90	1.24	807A
808	1 1/4	3/4		7/8		11 1/2	9/16	2 1/16	1.16	1.56	808
808A	1 5/16		1		7/8	11 1/2	9/16	2 1/16	1.16	1.56	808A
809	1 7/16	7/8		1		13 3/8	21/32	2 3/8	1.56	2.08	809
809A	1 1/2		1 1/8		1	13 3/8	21/32	2 3/8	1.56	2.08	809A
810	1 5/8	1		1 1/8		15 1/4	3/4	2 5/8	2.10	2.80	810
810A	1 11/16		1 1/4		1 1/8	15 1/4	3/4	2 5/8	2.10	2.80	810A
811	1 13/16	1 1/8		1 1/4		17 1/8	13/16	2 7/8	2.80	3.70	811
811A	1 7/8				1 1/4	17 1/8	13/16	2 7/8	2.80	3.70	811A
812	2	1 1/4		1 3/8		19	15/16	3 1/4	3.70	4.80	812
813	2 3/16	1 3/8		1 1/2		21	1	3 1/2	4.70	6.00	813
813A	2 1/4				1 1/2	21	1	3 1/2	4.70	6.00	813A
814	2 3/8	1 1/2				23	1 1/16	3 3/4	6.00	7.50	814
815	2 9/16	1 5/8				25	1 1/8	4	7.50	9.20	815
815A	2 5/8				1 3/4	25	1 1/8	4	7.50	9.20	815A
816	2 3/4	1 3/4				27	1 1/4	4 1/4	9.80	12.50	816
817A	3				2	30	1 3/8	4 3/4	13.00	17.00	817A
817	3 1/8	2				30	1 3/8	4 3/4	13.00	17.00	817

Weights, page H.

10-42

✦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 37-A)

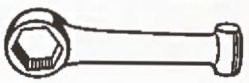
WILLIAMS' ✦ "SUPERIOR" HEX-BOX WRENCHES
(Carbon Steel)

REGULAR PATTERN—15° Angle
(Continued)

The following long Finished Wrenches have hole of size given below in end of handle:

Number,	817	817A	818	818A	819	819A	819AC	819B	820	820B
Hole; diam.	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8	1	1 inch

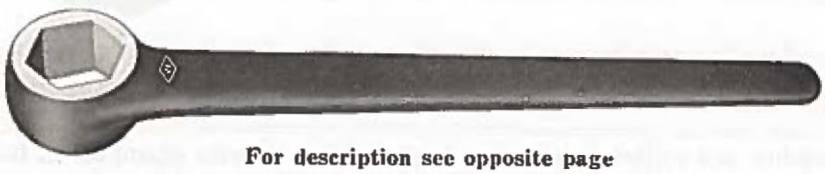
†At extra charge Nos. 818 to 820B inclusive are also furnished with "striking-face" on end of shorter handle as illustrated at right; extreme lengths as follows—



Number,	818	818A	819	819B	819A	819AC	820	820B
Length,	18-1/2	18-1/2	19-1/2	19-1/2	20-1/4	20-1/4	21	21 in.

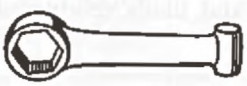
No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. REGLR. Nut	Extreme Length, Approx.	Head		LIST PRICE		No.
					Thickness	Outside Diam.	Unhard.	Finished	
†818A	3 3/8		2 1/4	†34	1 1/2	5 1/4	$17.00	$22.00	†818A
†818	3 1/2	2 1/4		†34	1 1/2	5 1/4	17.00	22.00	†818
†819B	3 3/4		2 1/2	†38	1 5/8	5 7/8	23.00	29.00	†819B
†819	3 7/8	2 1/2		†38	1 5/8	5 7/8	23.00	29.00	†819
†819AC	4 1/8		2 3/4	†42	1 3/4	6 1/2	30.00	37.00	†819AC
†819A	4 1/4	2 3/4		†42	1 3/4	6 1/2	30.00	37.00	†819A
†820B	4 1/2		3	†46	1 7/8	7	40.00	50.00	†820B
†820	4 5/8	3		†46	1 7/8	7	40.00	50.00	†820

✦"SUPERIOR" HEX-BOX WRENCHES—HEAVY PATTERN



For description see opposite page

†At extra charge all Heavy Pattern Hex-Box Wrenches are also furnished with "striking-face" on end of shorter handle as illustrated at right; extreme lengths as follows—



Number,	H808 H808A	H809 H809A	H810 H810A	H811 H811A	H812	H813 H813A	H814	H815 H815A	H816	H817A H817
Length,	7	8	9	10	11	12	13	14	15	17

No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Extreme Length, Approx.	Head		LIST PRICE		No.
							Thickness	Outside Diam.	Unhard.	Finished	
†H808	1 1/4	3/4		7/8		†11 1/2	13/16	2 1/16	$ 1.70	$ 2.20	†H808
†H808A	1 5/16		1		7/8	†11 1/2	13/16	2 1/16	1.70	2.20	†H808A
†H809	1 7/16	7/8		1		†13 3/8	15/16	2 3/8	2.30	2.95	†H809
†H809A	1 1/2		1 1/8		1	†13 3/8	15/16	2 3/8	2.30	2.95	†H809A
†H810	1 5/8	1		1 1/8		†15 1/4	1 1/8	2 5/8	3.00	3.90	†H810
†H810A	1 11/16		1 1/4		1 1/8	†15 1/4	1 1/8	2 5/8	3.00	3.90	†H810A
†H811	1 13/16	1 1/8		1 1/4		†17	1 1/4	2 15/16	4.00	5.15	†H811
†H811A	1 7/8				1 1/4	†17	1 1/4	2 15/16	4.00	5.15	†H811A
†H812	2	1 1/4		1 3/8		†19	1 3/8	3 1/4	5.25	6.65	†H812
†H813	2 3/16	1 3/8		1 1/2		†21	1 1/2	3 1/2	6 70	8.40	†H813
†H813A	2 1/4				1 1/2	†21	1 1/2	3 1/2	6.70	8.40	†H813A
†H814	2 3/8	1 1/2				†23	1 5/8	3 3/4	8.50	10.50	†H814
†H815	2 9/16	1 5/8				†25	1 3/4	4 1/8	10.50	13.00	†H815
†H815A	2 5/8				1 3/4	†25	1 3/4	4 1/8	10.50	13.00	†H815A
†H816	2 3/4	1 3/4				†27	1 7/8	4 9/16	14.00	17.50	†H816
†H817A	3				2	†30	2	4 13/16	19.00	24.00	†H817A
†H817	3 1/8	2				†30	2	4 13/16	19.00	24.00	†H817

Weights, page H.

✦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 37-A)

WILLIAMS' ✦ "SUPERIOR" SET SCREW WRENCHES

(Carbon Steel)

22 1/2° Angle, Single Head

For Set Screws, Square Cap Screws and Nuts



These Wrenches are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

No.	Nominal Opening	For Set Screw; Size	For Square Head Cap Screw	For Amer. Std. REGULAR Square Nut	Extreme Length, Approx.	Thickness Head	LIST PRICE Each Finished	No.
500	3/16	3/16			3	3/16	$.28	500
501	1/4	1/4			3 1/2	1/4	.34	501
502	5/16	5/16			4 1/4	5/16	.42	502
503	3/8	3/8	1/4		5	11/32	.50	503
504	7/16	7/16	5/16	1/4	5 3/4	3/8	.62	504
505	1/2	1/2	3/8		6 5/8	7/16	.76	505
506	9/16	9/16	7/16	5/16	7 1/2	1/2	.92	506
507	5/8	5/8	1/2	3/8	8 1/2	9/16	1.10	507
508	3/4	3/4	5/8	7/16	9 1/2	5/8	1.36	508
509	7/8	7/8	3/4	9/16	10 1/2	11/16	1.68	509
510	1	1		5/8	11 1/2	3/4	2.20	510
511	1 1/8	1 1/8	7/8	3/4	12 1/2	13/16	2.80	511

Weights, page G.

10-42

✦ REGISTERED TRADE MARK

WILLIAMS' ✦ "SUPERIOR" SET SCREW WRENCHES

(Carbon Steel)

22 1/2° Angle, Double Head

For Set Screws, Square Cap Screws and Nuts



These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

No.	Nominal Openings	For Set Screws; Size	For Square Head Cap Screws; Diam. Screws	For Amer. Std. REGULAR Square Nuts	Extreme Length, Approx.	Thickness Head	LIST PRICE Each Finished	No.
523	3/16 & 1/4	3/16 & 1/4			3 1/2	7/32	$.40	523
524	3/16 & 5/16	3/16 & 5/16			4 1/4	9/32	.48	524
525	1/4 & 5/16	1/4 & 5/16			4 1/4	9/32	.48	525
526	1/4 & 3/8	1/4 & 3/8	1/4		5	11/32	.58	526
527	5/16 & 3/8	5/16 & 3/8	1/4		5	11/32	.58	527
528	5/16 & 7/16	5/16 & 7/16	5/16	1/4	5 3/4	3/8	.70	528
529	3/8 & 7/16	3/8 & 7/16	1/4 & 5/16	1/4	5 3/4	3/8	.70	529
530	3/8 & 1/2	3/8 & 1/2	1/4 & 3/8		6 5/8	7/16	.90	530
531	7/16 & 1/2	7/16 & 1/2	5/16 & 3/8	1/4	6 5/8	7/16	.90	531
532	7/16 & 9/16	7/16 & 9/16	5/16 & 7/16	1/4 & 5/16	7 1/2	1/2	1.08	532
533	1/2 & 9/16	1/2 & 9/16	3/8 & 7/16	5/16	7 1/2	1/2	1.08	533
534	1/2 & 5/8	1/2 & 5/8	3/8 & 1/2	3/8	8 1/2	9/16	1.30	534
535	9/16 & 5/8	9/16 & 5/8	7/16 & 1/2	5/16 & 3/8	8 1/2	9/16	1.30	535
536	9/16 & 3/4	9/16 & 3/4	7/16 & 5/8	5/16 & 7/16	9 3/4	5/8	1.60	536
537	5/8 & 3/4	5/8 & 3/4	1/2 & 5/8	3/8 & 7/16	9 3/4	5/8	1.60	537
538	5/8 & 7/8	5/8 & 7/8	1/2 & 3/4	3/8 & 9/16	11	11/16	2.00	538
539	3/4 & 7/8	3/4 & 7/8	5/8 & 3/4	7/16 & 9/16	11	11/16	2.00	539
540	3/4 & 1	3/4 & 1	5/8	7/16 & 5/8	12 1/2	3/4	2.60	540
541	7/8 & 1	7/8 & 1	3/4	9/16 & 5/8	12 1/2	3/4	2.60	541
542	7/8 & 1 1/8	7/8 & 1 1/8	3/4 & 7/8	9/16 & 3/4	14	13/16	3.50	542
543	1 & 1 1/8	1 & 1 1/8	7/8	5/8 & 3/4	14	13/16	3.50	543

Weights, page G.

✦ REGISTERED TRADE MARK

WILLIAMS' ✦ "SUPERIOR" S WRENCHES WITH FLAT HANDLE

(Carbon Steel)

22 1/2° Angle, Double Head



For Standard Nuts and Cap Screws

Finished are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright. Whitworth Standard sizes, see page 126.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U. S. S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Finished	No.
661D	5/16 & 3/8	1/8	1/8 & 3/16			4	$.44	661D
661G	3/8 & 1/2		3/16 & 5/16	5/16		4	.44	661G
661C	13/32 & 1/2	3/16 & 1/4	5/16	5/16		4	.44	661C
662D	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5	.58	662D
662E	7/16 & 9/16		1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	5	.58	662E
662B	1/2 & 19/32	1/4 & 5/16	5/16	5/16		5	.58	662B
663D	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6 1/4	.78	663D
663E	9/16 & 3/4		3/8 & 1/2	3/8 & 1/2	5/16 & 7/16	6 1/4	.78	663E
663A	19/32 & 11/16	5/16 & 3/8				6 1/4	.78	663A
663F	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	6 1/4	.78	663F
663C	11/16 & 25/32	3/8 & 7/16				6 1/4	.78	663C
664A	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	7 1/2	1.06	664A
664D	3/4 & 13/16		1/2 & 9/16	1/2	7/16 & 1/2	7 1/2	1.06	664D
664E	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	7 1/2	1.06	664E
664B	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	7 1/2	1.06	664B
665D	13/16 & 1		9/16 & 3/4		1/2 & 5/8	9	1.44	665D
665A	7/8 & 31/32	1/2 & 9/16	5/8	9/16	9/16	9	1.44	665A
665B	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	9	1.44	665B
666B	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8		10 1/2	2.00	666B
666S	1 1/8 & 1 5/16		7/8 & 1		3/4 & 7/8	10 1/2	2.00	666S
667A	1 1/4 & 1 7/16	3/4 & 7/8		7/8 & 1		12	2.90	667A
667C	1 7/16 & 1 5/8	7/8 & 1		1 & 1 1/8		12	2.90	667C
668C	1 5/8 & 2	1 & 1 1/4		1 1/8 & 1 3/8		14	5.00	668C

Weights, pages G and H.

✦ REGISTERED TRADE MARK

10-42

WILLIAMS' ✦ "SUPERIOR" LIGHT SERVICE WRENCHES

(Carbon Steel)

22 1/2° Angle, Double Head

Long and Light

DISCONTINUED
WILL SUPPLY UNTIL STOCK IS EXHAUSTED



Unfinished are milled, sizes stamped on heads, hardened and shot-blasted.

Finished are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

Supplied in Whitworth Standard and Metric Measure; see page 126.

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
75C	1/4 & 5/16	1/8	1/8			6 1/4	$.45	$.54	75C
75B	3/8 & 7/16		3/16 & 1/4	1/4	1/4	6 1/4	.45	.54	75B
75A	3/8 & 1/2	1/4	3/16 & 5/16	5/16		6 1/4	.45	.54	75A
75	13/32 & 1/2	3/16 & 1/4	5/16	5/16		6 1/4	.45	.54	75
77S	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	7 1/4	.58	.68	77S
77B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	7 1/4	.58	.68	77B
77	1/2 & 5/8	1/4	5/16 & 7/16	5/16 & 7/16	3/8	7 1/4	.58	.68	77
79S	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	8 1/4	.73	.86	79S
79D	19/32 & 11/16	5/16 & 3/8				8 1/4	.73	.86	79D
79	5/8 & 11/16	3/8	7/16	7/16	3/8	8 1/4	.73	.86	79
79C	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	8 1/4	.73	.86	79C
81H	5/8 & 13/16		7/16 & 9/16	7/16	3/8 & 1/2	9 1/4	.93	1.10	81H
81B	3/4 & 13/16		1/2 & 9/16	1/2	7/16 & 1/2	9 1/4	.93	1.10	81B
81A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9 1/4	.93	1.10	81A
83B	7/8 & 1	1/2	5/8 & 3/4	9/16	9/16 & 5/8	10 3/8	1.16	1.40	83B
83C	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	10 3/8	1.16	1.40	83C
85	1 & 1 1/8		3/4 & 7/8		5/8 & 3/4	12	1.65	2.00	85
85C	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8		12	1.65	2.00	85C

Sets, pages 28 and 29.

Weights, page F.

✦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 34)

WILLIAMS' +"SUPERIOR" OFFSET ANGLE WRENCHES

(Carbon Steel)

22 1/2° Angle, Double Head

DISCONTINUED
WILL SUPPLY UNTIL
STOCK IS EXHAUSTED



These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

Whitworth Standard sizes, see page 126.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Each Finished	No.
760A	5/16 & 1/2	1/8 & 1/4	1/8 & 5/16	5/16		4 3/4	$.50	760A
760B	13/32 & 1/2	3/16 & 1/4	5/16	5/16		4 3/4	.50	760B
760Y	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	4 3/4	.50	760Y
761X	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5 3/4	.62	761X
761	1/2 & 5/8	1/4	5/16 & 7/16	5/16 & 7/16	3/8	5 3/4	.62	761
761Z	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	5 3/4	.62	761Z
761C	19/32 & 11/16	5/16 & 3/8				5 3/4	.62	761C
762Y	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7	.80	762Y
762B	11/16 & 25/32	3/8 & 7/16				7	.80	762B
762C	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	7	.80	762C
763Y	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	8 1/4	1.06	763Y
763A	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	8 1/4	1.06	763A
764H	13/16 & 1		9/16 & 3/4		1/2 & 5/8	9 1/2	1.44	764H
764D	15/16 & 1 1/16	5/8		5/8 & 3/4		9 1/2	1.44	764D
764B	31/32 & 1 1/16	9/16 & 5/8		3/4		9 1/2	1.44	764B
765A	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8		11	1.92	765A
765C	1 1/4 & 1 7/16	3/4 & 7/8		7/8 & 1		11	1.92	765C

Weights, page H.

10-42

+ REGISTERED TRADE MARK

WILLIAMS' ✦"SUPERIOR" SQUARE BOX WRENCHES

(Carbon Steel)

22 1/2° Angle, Single Head

For Set Screws, Square Cap Screws and Nuts



Unhardened are broached and shot-blasted.

Finished are broached, surface and edges smooth, hardened and black enameled (baked on)—heads bright.

These Wrenches can also be furnished, to order, with 8-point openings.

No.	Nominal Opening	For Set Screw; Size	For Square Head Cap Screw	Amer. Std. REGLR. Square Nut	Extreme Length, Approx.	Head		LIST PRICE		No.
						Thickness	Outside Diam.	Unhardened	Finished	
580	3/16	3/16			3	1/4	1/2	$.22	$.30	580
581	1/4	1/4			3 3/8	9/32	5/8	.24	.34	581
582	5/16	5/16			3 3/4	5/16	11/16	.28	.40	582
583	3/8	3/8	1/4		4 1/4	3/8	27/32	.32	.48	583
584	7/16	7/16	5/16	1/4	4 7/8	7/16	31/32	.38	.56	584
585	1/2	1/2	3/8		5 1/2	15/32	1 1/16	.46	.68	585
586	9/16	9/16	7/16	5/16	6 1/4	1/2	1 3/16	.56	.82	586
587	5/8	5/8	1/2	3/8	7	9/16	1 5/16	.70	1.00	587
588	3/4	3/4	5/8	7/16	8	5/8	1 9/16	.88	1.24	588
589	7/8	7/8	3/4	9/16	9	11/16	1 25/32	1.20	1.62	589
590	1	1		5/8	10	3/4	2	1.60	2.10	590

Weights, page G.

✦ REGISTERED TRADE MARK

WILLIAMS' +"SUPERIOR" MACHINE WRENCHES

(Carbon Steel)

Extra Heavy for Planers

Milling Machines, Lathes, Drill Presses, etc.



These Wrenches are milled, surface and edges smooth, size stamped on large head, hardened and black enameled (baked on)—heads bright.

No.	Large Head for U. S. Standard Nut		Small Head				Extreme Length, Approx.	Thickness Heads	LIST PRICE Each Finished	No.
	Nominal Opening	Size Bolt	Nominal Opening	For Set Screw; Size	For Square Head Cap Screw	Amer. Std. REGLR. Square Nut				
595	11/16	3/8	3/8	3/8	1/4		6 1/2	17/32	$1.16	595
595B	11/16	3/8	7/16	7/16	5/16	1/4	6 1/2	17/32	1.16	595B
595C	11/16	3/8	1/2	1/2	3/8		6 1/2	17/32	1.16	595C
595D	25/32	7/16	3/8	3/8	1/4		6 1/2	17/32	1.16	595D
595E	25/32	7/16	7/16	7/16	5/16	1/4	6 1/2	17/32	1.16	595E
595F	25/32	7/16	1/2	1/2	3/8		6 1/2	17/32	1.16	595F
596	7/8	1/2	7/16	7/16	5/16	1/4	7 1/2	19/32	1.44	596
596B	7/8	1/2	1/2	1/2	3/8		7 1/2	19/32	1.44	596B
596C	7/8	1/2	9/16	9/16	7/16	5/16	7 1/2	19/32	1.44	596C
596D	7/8	1/2	5/8	5/8	1/2	3/8	7 1/2	19/32	1.44	596D
596E	31/32	9/16	7/16	7/16	5/16	1/4	7 1/2	19/32	1.44	596E
596F	31/32	9/16	1/2	1/2	3/8		7 1/2	19/32	1.44	596F
596G	31/32	9/16	9/16	9/16	7/16	5/16	7 1/2	19/32	1.44	596G
596H	31/32	9/16	5/8	5/8	1/2	3/8	7 1/2	19/32	1.44	596H
597	1 1/16	5/8	9/16	9/16	7/16	5/16	8 1/2	11/16	1.92	597
597B	1 1/16	5/8	5/8	5/8	1/2	3/8	8 1/2	11/16	1.92	597B
597C	1 1/16	5/8	3/4	3/4	5/8	7/16	8 1/2	11/16	1.92	597C
598	1 1/4	3/4	3/4	3/4	5/8	7/16	10	13/16	2.70	598
598B	1 1/4	3/4	7/8	7/8	3/4	9/16	10	13/16	2.70	598B
598C	1 1/4	3/4	1	1		5/8	10	13/16	2.70	598C
598D	1 7/16	7/8	3/4	3/4	5/8	7/16	10	13/16	2.70	598D
598E	1 7/16	7/8	7/8	7/8	3/4	9/16	10	13/16	2.70	598E
598F	1 7/16	7/8	1	1		5/8	10	13/16	2.70	598F

Weights, page G.

10-42

+ REGISTERED TRADE MARK

+"SUPERIOR" TOOL POST WRENCHES
(Carbon Steel)

For Set Screws



Nos. 554 to 557

For Nuts and Set Screws



Nos. 562B to 568D

Finished are milled and broached, surface and edges smooth, sizes stamped, hardened and black enameled (baked on)—heads bright.

For Set Screws

No.	Open End for Set Screw; Size	Closed End for Set Screw; Size	Extreme Length, Approx.	Thickness Heads	LIST PRICE Finished	No.
554	7/16	7/16	5 1/2	1/2	$1.12	554
555	1/2	1/2	6	9/16	1.24	555
555B	9/16	1/2	6	9/16	1.24	555B
555C	9/16	9/16	6	9/16	1.24	555C
556	5/8	5/8	7	5/8	1.44	556
556B	11/16	5/8	7	5/8	1.44	556B
556C	11/16	11/16	7	5/8	1.44	556C
557	3/4	3/4	7 5/8	11/16	1.64	557

*For Nuts and Set Screws

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. REGULAR Nut Size Bolt	Closed End for Set Screw; Size	Extreme Length, Approx.	Thickness Heads	LIST PRICE Finished	No.
562B	5/8		3/8	9/16	6 1/2	1/2	$1.32	562B
562	11/16	3/8		9/16	6 1/2	1/2	1.32	562
563E	13/16		1/2	7/16	7	9/16	1.44	563E
563F	13/16		1/2	1/2	7	9/16	1.44	563F
563G	13/16		1/2	9/16	7	9/16	1.44	563G
563H	13/16		1/2	5/8	7	9/16	1.44	563H
563	7/8	1/2	9/16	7/16	7	9/16	1.44	563
563B	7/8	1/2	9/16	1/2	7	9/16	1.44	563B
563C	7/8	1/2	9/16	9/16	7	9/16	1.44	563C
563D	7/8	1/2	9/16	5/8	7	9/16	1.44	563D
564C	1		5/8	5/8	7 1/2	5/8	1.64	564C
564	1 1/16	5/8		5/8	7 1/2	5/8	1.64	564
565C	1		5/8	3/4	8	5/8	1.94	565C
565	1 1/16	5/8		3/4	8	5/8	1.94	565
566C	1 1/8		3/4	3/4	9 1/4	3/4	2.40	566C
566D	1 1/8		3/4	7/8	9 1/4	3/4	2.40	566D
566	1 1/4	3/4		3/4	9 1/4	3/4	2.40	566
566B	1 1/4	3/4		7/8	9 1/4	3/4	2.40	566B
567D	1 1/8		3/4	1	10	7/8	3.20	567D
567	1 1/4	3/4		1	10	7/8	3.20	567
567E	1 5/16		7/8	7/8	10	7/8	3.20	567E
567F	1 5/16		7/8	1	10	7/8	3.20	567F
567B	1 7/16	7/8		7/8	10	7/8	3.20	567B
567C	1 7/16	7/8		1	10	7/8	3.20	567C
568E	1 1/2		1	7/8	11	15/16	4.40	568E
568F	1 1/2		1	1	11	15/16	4.40	568F
568	1 5/8	1		7/8	11	15/16	4.40	568
568B	1 5/8	1		1	11	15/16	4.40	568B
568G	1 11/16		1 1/8	1	11	15/16	4.40	568G
568H	1 7/8		1 1/4	1	11	15/16	4.40	568H
568C	1 13/16	1 1/8		1	11	15/16	4.40	568C
568D	2	1 1/4		1	11	15/16	4.40	568D

*Whitworth Standard sizes start on page 124.

Weights, page G.

+ REGISTERED TRADE MARK

WILLIAMS' ✦"SUPERIOR" CONSTRUCTION WRENCHES

(Carbon Steel)

15° Angle



These Wrenches with deep opening provide substantial bearing on square nuts. The long handle is round for the greater part of its length, with tapered end for easy insertion into bolt holes when bringing them into line.

Hardened are milled, hardened all over, shot-blasted; heads not bright.

Whitworth Standard sizes, see page 125.

Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration at right.



No.	Nominal Opening	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. REGULAR Nut Size Bolt	Extreme Length, Approx.	Thickness Head	LIST PRICE Hardened	No.
201A	7/16		1/4	9 1/2	3/8	$.75	201A
201	1/2	1/4		9 1/2	3/8	.75	201
201B	9/16		5/16	9 1/2	3/8	.75	201B
202	19/32	5/16		9 1/2	3/8	.75	202
203A	5/8		3/8	12	7/16	.95	203A
203	11/16	3/8		12	7/16	.95	203
204A	3/4		7/16	12	7/16	.95	204A
204	25/32	7/16		12	7/16	.95	204
205A	13/16		1/2	14 1/2	17/32	1.20	205A
*205	7/8	1/2	9/16	14 1/2	17/32	1.20	*205
*206	31/32	9/16		14 1/2	17/32	1.20	*206
206B	1		5/8	14 1/2	17/32	1.20	206B
*207	1 1/16	5/8		17	5/8	1.55	*207
207A	1 1/8		3/4	17	5/8	1.55	207A
*208	1 1/4	3/4		19	11/16	2.05	*208
208A	1 5/16		7/8	19	11/16	2.05	208A
*209	1 7/16	7/8		21	3/4	2.70	*209
209A	1 1/2		1	21	3/4	2.70	209A
210	1 5/8	1		23	27/32	3.60	210
210A	1 11/16		1 1/8	23	27/32	3.60	210A
211	1 13/16	1 1/8		25	15/16	5.30	211
211A	1 7/8		1 1/4	25	15/16	5.30	211A
212	2	1 1/4		25	15/16	5.30	212

*Carried in stock with short tangs for oil construction and derrick service. Details on request.

Weights, page F.

✦ REGISTERED TRADE MARK

10-42

(Alloy Steel Wrenches, page 35)

WILLIAMS' +"SUPERIOR" STRUCTURAL WRENCHES

(Carbon Steel)

Straight Opening



The jaws of these Wrenches are narrow and long, providing substantially full bearing on square nuts. The long handle is round for the greater part of its length, with tapered end for easy insertion into bolt holes when bringing them into line.

The abrupt offset and angle of handle provide for clearance of obstructions, even when these are close to the head, and safety to the operator's hands. The wrench is particularly well balanced. When thrust into slit of scabbard or belt-loop the "step-up" of the round above the flat part of handle acts as a stop. It retains the wrench, yet allows its ready release.

For explanation of finish, see previous page. Whitworth Standard sizes, see page 126.

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. REGLR. Nut; Size Bolt	Extreme Length, Approx.	Thickness Head	Handle Offset		LIST PRICE Hardened	No.
						At Head	At End		
901A	7/16		1/4	9 1/2	11/32	9/16	1 1/2	$.80	901A
901	†1/2	1/4		9 1/2	11/32	9/16	1 1/2	.80	901
901B	9/16		5/16	9 1/2	11/32	9/16	1 1/2	.80	901B
902	†19/32	5/16		9 1/2	11/32	9/16	1 1/2	.80	902
903A	5/8		3/8	12	7/16	3/4	1 11/16	1.05	903A
*903	†11/16	3/8		12	7/16	3/4	1 11/16	1.05	*903
904A	3/4		7/16	12	7/16	3/4	1 11/16	1.05	904A
904	†25/32	7/16		12	7/16	3/4	1 11/16	1.05	904
905A	13/16		1/2	14 1/2	17/32	7/8	1 7/8	1.40	905A
905B	7/8		9/16	14 1/2	17/32	7/8	1 7/8	1.40	905B
*905	†7/8	1/2		14 1/2	17/32	7/8	1 7/8	1.40	*905
*906	1		5/8	14 1/2	17/32	7/8	1 7/8	1.40	*906
*907	†1 1/16	5/8		17	5/8	1	2 3/8	1.85	*907
907A	1 1/8		3/4	17	5/8	1	2 3/8	1.85	907A
*908	†1 1/4	3/4		19	11/16	1 1/8	2 3/4	2.35	*908
908A	1 5/16		7/8	19	11/16	1 1/8	2 3/4	2.35	908A
*909	†1 7/16	7/8		21	3/4	1 1/4	3 1/16	3.00	*909
	1 1/2		1						
*910	†1 5/8	1		23	13/16	1 7/16	3 3/8	4.10	*910
	1 11/16		1 1/8						
910A	†1 13/16	1 1/8		23	13/16	1 7/16	3 3/8	4.10	910A
	1 7/8		1 1/4						
911	†1 13/16	1 1/8		25	7/8	1 5/8	3 11/16	6.15	911
	1 7/8		1 1/4						
912	†2	1 1/4		25	7/8	1 5/8	3 11/16	6.15	912

†Based on U. S. S. Nut Formula. Actual openings are 1/32 to 1/16" larger for proper clearance on rough nuts and bolts.
* Carried in stock with short tangs for oil construction and derrick service. Details on request.

+ REGISTERED TRADE MARK

Weights, page H.

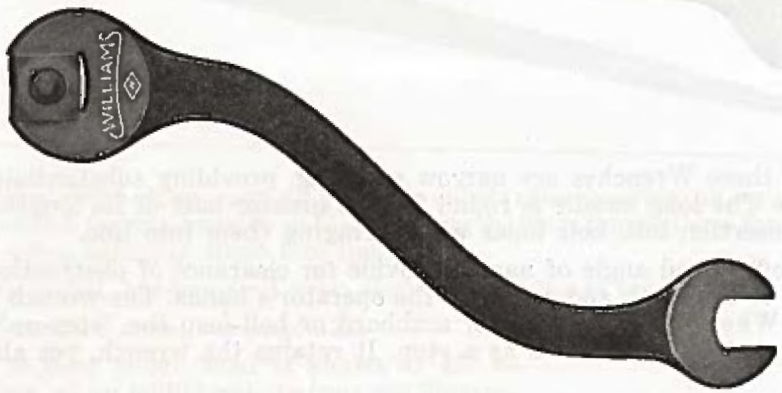
(Alloy Steel Wrenches, page 35)

WILLIAMS' +"SUPERIOR" HEAVY "S" OR CAR WRENCHES

(Carbon Steel)

22 1/2° Angle, Double Head

Long Leverage



Unhardened are milled only.

Hardened are milled, hardened all over, shot-blasted; heads not bright.

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Unhardened	LIST PRICE Hardened	No.
367A	5/8 & 13/16		3/8 & 1/2	12	DISCONTINUED FOR "THE DURATION"	$1.50	367A
367	11/16 & 7/8	3/8 & 1/2		12		1.50	367
370	7/8 & 1 1/16	1/2 & 5/8		19		2.50	370
370B	1 & 1 1/8		5/8 & 3/4	19		2.50	370B
* 372A	1 1/16 & 1 1/4	5/8 & 3/4		20		3.10	372A
373	1 1/8 & 1 5/16		3/4 & 7/8	20		3.10	373
376	1 5/16 & 1 1/2		7/8 & 1	21		3.70	376
377	1 5/16 & 1 11/16		7/8 & 1 1/8	22		4.50	377
† 378A	1 7/16 & 1 5/8	7/8 & 1		22		4.50	378A
379	1 1/2 & 1 11/16		1 & 1 1/8	22		4.50	379
382	1 11/16 & 1 7/8		1 1/8 & 1 1/4	23		5.30	382
383B	1 7/8 & 2 1/4		1 1/4 & 1 1/2	24		6.30	383B
387	1 13/16 & 2 3/8	1 1/8 & 1 1/2		25		9.00	387

*No. 372A supersedes Old No. 373 previously listed for 5/8 & 3/4" U. S. Nuts.
†No. 378A supersedes Old No. 379 previously listed for 7/8 & 1" U. S. Nuts.

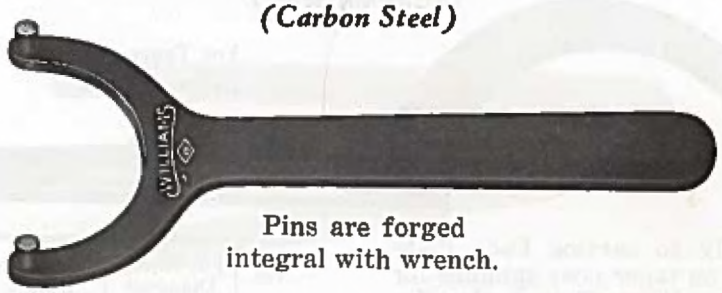
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Weights, page F.

+ REGISTERED TRADE MARK

WILLIAMS' +"SUPERIOR" FACE SPANNERS

(Carbon Steel)



Pins are forged integral with wrench.

These Wrenches have surfaces smoothed, pins milled, hardened all over and black enameled.

No.	Pins			Span of Jaws in Clear	Length from C. of Pins	Thickness	LIST PRICE Each Finished	No.
	Distance C to C	Diameter Milled	Length					
418	1	3/16	3/16	11/16	4 1/2	3/16	$.60	418
420	1 1/4	7/32	7/32	7/8	5	3/16	.66	420
422	1 1/2	7/32	7/32	1 1/8	5 1/2	3/16	.74	422
424	1 3/4	7/32	7/32	1 3/8	6	7/32	.84	424
426	2	1/4	1/4	1 19/32	6 1/2	7/32	.96	426
428	2 1/4	1/4	1/4	1 27/32	7	7/32	1.10	428
430	2 1/2	9/32	9/32	2 1/32	7 1/2	1/4	1.28	430
432	2 3/4	9/32	9/32	2 9/32	8	1/4	1.48	432
434	3	5/16	5/16	2 1/2	8 1/2	1/4	1.70	434
436	3 1/4	5/16	5/16	2 3/4	9 1/8	1/4	1.94	436
438	3 1/2	5/16	5/16	3	9 3/4	1/4	2.20	438
440	3 3/4	3/8	3/8	3 3/16	10 3/8	1/4	2.50	440
442	4	3/8	3/8	3 7/16	11	1/4	2.90	442

+"SUPERIOR" PIN SPANNERS

(Carbon Steel)



Pins are forged integral with wrench. For conditions of finish, see above.

Number	For Circle; Diameter	Extreme Length, Approx.	Finished Diameter Pin	LIST PRICE Each Finished	Number
452	1	4	3/16	$.54	452
453	1 1/4	4 1/2	13/64	.58	453
454	1 1/2	5	7/32	.60	454
455	1 3/4	5 1/2	15/64	.62	455
456	2	6	1/4	.66	456
457	2 1/4	6 1/2	17/64	.70	457
458	2 1/2	7	9/32	.72	458
459	2 3/4	7 1/2	19/64	.78	459
460	3	8	5/16	.84	460
461	3 1/4	8 1/2	21/64	.90	461
462	3 1/2	9	11/32	.96	462
463	3 3/4	9 1/2	23/64	1.02	463
464	4	10	3/8	1.08	464
466	5	12	7/16	1.44	466
468	6	14	1/2	1.96	468

Weights, page G.

+ REGISTERED TRADE MARK

WILLIAMS' +"SUPERIOR" HOOK SPANNERS

(Carbon Steel)



For Taper Nose Lathe Spindles

Made especially to service Face Plate Draw Nuts used on taper-nose spindles for new design lathes. Very efficient, also, for general work.

Supplied with bearing pads and hook machined; hardened, black enameled (baked).

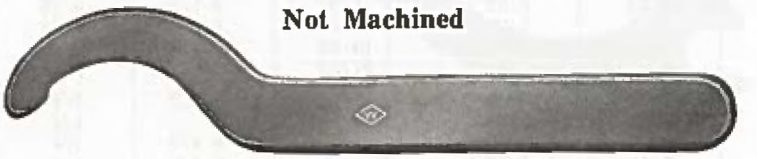
No.	For Circle; Diameter	Extreme Length	Thickness, Hook End	LIST Each
414	* 7 3/8	20	5/8	$5.50
415	* 9 1/4	23 1/4	11/16	8.00
416	*12 1/2	30 3/4	3/4	14.00

*Can be furnished to order for circle 1/8" larger.

FLAT HOOK SPANNERS

(Carbon Steel)

Not Machined



The diameter of circle which the unfinished forgings fit is given in second column of table, but wrenches will finish to sizes stated in third column.

No.	Forgings for Circle; Diameter	Forgings will finish for Circles; Diameter	Extreme Length, Approx.	Thickness	LIST PRICE Each	No.
403	1 1/4	1 to 1 1/4	4 3/4	7/32	$.40	403
404	1 1/2	1 3/8 to 1 5/8	6	1/4	.46	404
405	2	1 3/4 to 2	7 1/8	1/4	.52	405
406	2 1/4	2 1/8 to 2 3/8	8 7/16	1/4	.60	406
407	2 5/8	2 1/2 to 2 3/4	9 3/4	1/4	.68	407
408	3 1/8	2 7/8 to 3 1/4	11	5/16	.80	408
409	3 3/4	3 3/8 to 3 7/8	12	5/16	.96	409
410	4 3/8	4 to 4 1/2	13	5/16	1.16	410
412	5 3/4	5 1/4 to 5 3/4	15	7/16	1.70	412

LIGHT HOOK SPANNERS

(Carbon Steel)

Not Machined



No.	For Circle; Diameter	Extreme †Length, Approx.	Hook			Diameter Handle	LIST PRICE Each	No.
			Length	Width	Thickness			
491	1 3/16	6 1/2	1/16	3/8	7/32	3/8	$.30	491
493	1 3/4	7 1/2	1/8	3/8	7/32	3/8	.34	493
494	2 1/8	8	1/8	3/8	7/32	3/8	.36	494
495	2 1/2	8 1/4	1/8	3/8	7/32	3/8	.40	495
496	2 3/4	8 1/2	1/8	3/8	7/32	3/8	.44	496
497	3	8 3/4	1/8	3/8	7/32	3/8	.48	497
498	3 1/2	9	1/8	3/8	7/32	3/8	.52	498

†Length of handle can be varied if desired.

Weights, pages F and G.

+ REGISTERED TRADE MARK

10-42

WILLIAMS' ✦"SUPERIOR" ADJUSTABLE FACE SPANNERS
(Carbon Steel)



Drop-forged from a strong, tough grade of carefully selected steel, this is a desirable and dependable tool for service where Center to Center dimensions vary.

These Wrenches have pins milled, surfaces smooth, hardened, black enameled (baked on).

No.	Extreme Capacity	Extreme Length, Approx.	Diameter of Pins	LIST PRICE Each Finished	No.
482	2	6 3/8	3/16	$1.50	482
483	3	8 1/4	1/4	2.20	483
484	4	10 3/8	5/16	3.20	484

✦"SUPERIOR" ADJUSTABLE HOOK SPANNERS
(Carbon Steel)



These Spanners offer an unusual combination of strength and ready adjustment; each tool provides for a wide range of sizes—see table. Drop-forged from a strong, tough grade of carefully selected steel, surfaces smoothed, black enameled (baked on); jaw hardened and tempered.

Sold individually, or in Set No. 400 which is especially serviceable on spindle bearings of lathes, milling machines and grinding machines. Also, for adjusting collars and slotted rings used on many types of automatic machines.



SET No. 400
LIST PRICE, Complete—$7.25
In Leatherette Roll
1 Each, Nos. 471, 472, 474.

No.	Capacity for Circles, Diameter	Extreme Length, Approx.	Thickness		Depth Hook	LIST PRICE Finished	No.
			Handle	Hook			
471	3/4 to 2	6 3/8	1/4	11/32	1/8	$1.75	471
472	1 1/4 to 3	8 1/8	9/32	13/32	5/32	2.00	472
474	2 to 4 3/4	11 3/8	5/16	15/32	3/16	2.75	474

Alloy Steel Adjustable Hook Spanners, page 42.

Weights, page G.

✦ REGISTERED TRADE MARK

WILLIAMS' +"SUPERIOR" SOCKET WRENCHES

(Carbon Steel)



STRAIGHT PATTERN

With or Without Pin-Handle

Unhardened are broached and shot-blasted.

* **Finished** are broached, surface smooth, hardened and black enameled (baked on); face bright.

Whitworth Standard sizes, see page 127.

Special broaching to order in reasonable quantities.

(Continued on following page)

*** Finished Wrenches with Pin-Handles will be supplied, unless otherwise specified.**

No.	HEXAGON OPENINGS: Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGLR. Nut; Size Bolt	Diam. of Head	Extreme Length, Approx.	LIST PRICE: Unhardened Without Pin-Handle	LIST PRICE: Unhardened With Pin-Handle	LIST PRICE: Finished Without Pin-Handle	LIST PRICE: Finished With Pin-Handle	No.
961A	5/16	1/8				1/2	4 1/4	DISCONTINUED FOR "THE DURATION"	DISCONTINUED FOR "THE DURATION"	DISCONTINUED FOR "THE DURATION"	$.80	961A
962D	3/8		3/16			5/8	4 1/2				.88	962D
963A	13/32	3/16				11/16	4 7/8				.98	963A
963D	7/16		1/4	1/4	1/4	11/16	4 7/8				.98	963D
964A	1/2	1/4	5/16	5/16		3/4	5 1/4				1.04	964A
965D	9/16		3/8	3/8	5/16	7/8	5 3/4				1.16	965D
965A	19/32	5/16				7/8	5 3/4				1.16	965A
966D	5/8		7/16	7/16	3/8	1	6 1/8				1.26	966D
967A	11/16	3/8				1 1/8	6 1/2				1.42	967A
967D	3/4		1/2	1/2	7/16	1 1/8	6 1/2				1.42	967D
968A	25/32	7/16				1 1/4	7				1.54	968A
968D	13/16		9/16		1/2	1 1/4	7				1.54	968D
969A	7/8	1/2	5/8	9/16	9/16	1 3/8	7 3/8				1.74	969A
970S	15/16			5/8		1 1/2	7 7/8				1.96	970S
970A	31/32	9/16				1 1/2	7 7/8				1.96	970A
970D	1		3/4		5/8	1 1/2	7 7/8				1.96	970D
971A	1 1/16	5/8		3/4		1 5/8	8 1/4				2.20	971A
971D	1 1/8		7/8		3/4	1 5/8	8 1/4				2.20	971D
973A	1 1/4	3/4		7/8		1 7/8	9 1/8				3.00	973A
973B	1 5/16		1		7/8	1 7/8	9 1/8				3.00	973B
975A	1 7/16	7/8		1		2 1/8	10				3.70	975A
975D	1 1/2		1 1/8		1	2 1/8	10				3.70	975D
976A	1 5/8	1		1 1/8		2 3/8	10 3/8				4.24	976A
976B	1 11/16		1 1/4		1 1/8	2 3/8	10 3/8				4.24	976B
977A	1 13/16	1 1/8		1 1/4		2 5/8	10 7/8				4.80	977A
977B	1 7/8				1 1/4	2 5/8	10 7/8				4.80	977B
978A	2	1 1/4		1 3/8		2 7/8	11 3/8				5.70	978A
979A	2 3/16	1 3/8		1 1/2		3	11 7/8				7.30	979A
979B	2 1/4				1 1/2	3	11 7/8				7.30	979B
980A	2 3/8	1 1/2				3 5/16	12 1/2				9.70	980A

☼Temporarily furnished with loose parkerized pin handles. All other sizes assembled.

Weights, page H.

+ REGISTERED TRADE MARK

3-43

WILLIAMS' +"SUPERIOR" SOCKET WRENCHES

(Carbon Steel)

STRAIGHT PATTERN

With or Without Pin-Handle

(Continued from previous page)

Hexagon end of shank is designed for use in combination with another wrench or with Pin-Handle.

Wrenches of shorter or longer lengths than stated in table can be furnished to order in quantities.

* **Finished Wrenches with Pin-Handles will be supplied, unless otherwise specified.**



No.	SQUARE OPENINGS: Nominal Opening	SQUARE OPENINGS: Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	SQUARE OPENINGS: For Cap Screw; Diam. Screw	SQUARE OPENINGS: For Set Screw; Size	SQUARE OPENINGS: Amer. Std. REGULAR Nut; Size Bolt	Diam. of Head	Extreme Length, Approx.	LIST PRICE: Unhardened: Without Pin-Handle	LIST PRICE: Unhardened: With Pin-Handle	LIST PRICE: Finished: Without Pin-Handle	LIST PRICE: Finished: With Pin-Handle	No.
960H	1/8			1/8		5/16	3 3/4	DISCONTINUED FOR "THE DURATION"	DISCONTINUED FOR "THE DURATION"	DISCONTINUED FOR "THE DURATION"	$.70	960H
961H	3/16			3/16		1/2	4 1/4				.80	961H
*961J	1/4			1/4		1/2	4 1/4				.80	961J *
962H	5/16			5/16		5/8	4 1/2				.88	962H
963H	3/8		1/4	3/8		11/16	4 7/8				.98	963H
965H	7/16		5/16	7/16	1/4	7/8	5 3/4				1.16	965H
966H	1/2	1/4	3/8	1/2		1	6 1/8				1.26	966H
967H	9/16		7/16	9/16	5/16	1 1/8	6 1/2				1.42	967H
968H	5/8		1/2	5/8	3/8	1 1/4	7				1.54	968H
*968P	11/16	3/8	9/16			1 1/4	7				1.54	968P *
969H	3/4		5/8	3/4	7/16	1 3/8	7 3/8				1.74	969H
970H	13/16				1/2	1 1/2	7 7/8				1.96	970H
971H	7/8	1/2	3/4	7/8	9/16	1 5/8	8 1/4				2.20	971H
973H	1			1	5/8	1 7/8	9 1/8				3.00	973H
974H	1 1/8		7/8	1 1/8	3/4	2	9 1/2				3.40	974H
976H	1 1/4	3/4	1	1 1/4		2 3/8	10 3/8				4.24	976H
977X	1 7/16	7/8				2 5/8	10 7/8				4.80	977X
977P	1 1/2		1 1/4	1 1/2	1	2 5/8	10 7/8				4.80	977P

* Temporarily furnished with loose parkerized pin handles. All other sizes assembled.

Weights, page H.

+ REGISTERED TRADE MARK

WILLIAMS' +"SUPERIOR" OFFSET SOCKET WRENCHES

(Carbon Steel)



Unhardened are broached and shot-blasted.

Finished are broached, surface smooth, hardened and black enameled, face bright.

Whitworth Standard sizes, see page 125.

(Continued on following page)

No.	HEXAGON OPENINGS					Diam. of Head	Extreme Length, Approx.	Handle Offset in Clear from Face of Wrench	LIST PRICE		No.
	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt				Unhardened	Finished	
261A	5/16	1/8				1/2	3 3/8	13/16	$.40	$.60	261A
262D	3/8		3/16			5/8	3 7/8	1	.44	.66	262D
263A	13/32	3/16				11/16	4 5/16	1 1/16	.48	.72	263A
263D	7/16		1/4	1/4	1/4	11/16	4 5/16	1 1/16	.48	.72	263D
264A	1/2	1/4	5/16	5/16		3/4	5 1/8	1 1/4	.52	.78	264A
265D	9/16		3/8	3/8	5/16	7/8	5 7/8	1 7/16	.58	.88	265D
265A	19/32	5/16				7/8	5 7/8	1 7/16	.58	.88	265A
266D	5/8		7/16	7/16	3/8	1	6 1/4	1 9/16	.64	.96	266D
267A	11/16	3/8				1 1/8	6 3/4	1 5/8	.72	1.08	267A
267D	3/4		1/2	1/2	7/16	1 1/8	6 3/4	1 5/8	.72	1.08	267D
268A	25/32	7/16				1 1/4	7 1/2	1 13/16	.80	1.20	268A
268D	13/16		9/16		1/2	1 1/4	7 1/2	1 13/16	.80	1.20	268D
269A	7/8	1/2	5/8	9/16	9/16	1 3/8	8 3/8	2	.92	1.38	269A
270S	15/16			5/8		1 1/2	9 1/8	2 3/16	1.04	1.56	270S
270A	31/32	9/16				1 1/2	9 1/8	2 3/16	1.04	1.56	270A
270D	1		3/4		5/8	1 1/2	9 1/8	2 3/16	1.04	1.56	270D
271A	1 1/16	5/8		3/4		1 5/8	10	2 3/8	1.20	1.80	271A
271D	1 1/8		7/8		3/4	1 5/8	10	2 3/8	1.20	1.80	271D
273A	1 1/4	3/4		7/8		1 7/8	11 5/8	2 3/4	1.60	2.40	273A
273B	1 5/16		1		7/8	1 7/8	11 5/8	2 3/4	1.60	2.40	273B
275A	1 7/16	7/8		1		2 1/8	13 1/4	3 1/8	2.00	3.00	275A
275D	1 1/2		1 1/8		1	2 1/8	13 1/4	3 1/8	2.00	3.00	275D
276A	1 5/8	1		1 1/8		2 3/8	14 7/8	3 1/2	2.30	3.44	276A
276B	1 11/16		1 1/4		1 1/8	2 3/8	14 7/8	3 1/2	2.30	3.44	276B
277A	1 13/16	1 1/8		1 1/4		2 5/8	16 1/2	3 7/8	2.60	3.90	277A
277B	1 7/8				1 1/4	2 5/8	16 1/2	3 7/8	2.60	3.90	277B
278A	2	1 1/4		1 3/8		2 7/8	18 1/4	4 3/8	3.20	4.80	278A
279A	2 3/16	1 3/8		1 1/2		3	20	4 7/8	4.20	6.30	279A
279B	2 1/4				1 1/2	3	20	4 7/8	4.20	6.30	279B
280A	2 3/8	1 1/2				3 5/16	21 3/4	5 3/8	5.60	8.40	280A

Weights, page F.

3-43

+ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 43)

WILLIAMS' +"SUPERIOR" OFFSET SOCKET WRENCHES

(Carbon Steel)



(Continued from previous page)

Special broaching to order in reasonable quantities.

These Offset Socket Wrenches, of shorter or longer lengths than stated in table, can be furnished to order in quantities.

No.	SQUARE OPENINGS					Diam. of Head	Extreme Length, Approx.	Handle Offset in Clear from Face of Wrench	LIST PRICE		No.
	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Cap Screw; Diam. Screw	For Set Screw; Size	Amer. Std. REGULAR Nut; Size Bolt				Unhardened	Finished	
260H	1/8			1/8		5/16	2 3/4	9/16	$.36	$.54	260H
261H	3/16			3/16		1/2	3 3/8	13/16	.40	.60	261H
261J	1/4			1/4		1/2	3 3/8	13/16	.40	.60	261J
262H	5/16			5/16		5/8	3 7/8	1	.44	.66	262H
263H	3/8		1/4	3/8		11/16	4 5/16	1 1/16	.48	.72	263H
265H	7/16		5/16	7/16	1/4	7/8	5 7/8	1 7/16	.58	.88	265H
266H	1/2	1/4	3/8	1/2		1	6 1/4	1 9/16	.64	.96	266H
267H	9/16		7/16	9/16	5/16	1 1/8	6 3/4	1 5/8	.72	1.08	267H
268H	5/8		1/2	5/8	3/8	1 1/4	7 1/2	1 13/16	.80	1.20	268H
268P	11/16	3/8	9/16			1 1/4	7 1/2	1 13/16	.80	1.20	268P
269H	3/4		5/8	3/4	7/16	1 3/8	8 3/8	2	.92	1.38	269H
270H	13/16				1/2	1 1/2	9 1/8	2 3/16	1.04	1.56	270H
271H	7/8	1/2	3/4	7/8	9/16	1 5/8	10	2 3/8	1.20	1.80	271H
273H	1			1	5/8	1 7/8	11 5/8	2 3/4	1.60	2.40	273H
274H	1 1/8		7/8	1 1/8	3/4	2	12 3/8	2 7/8	1.80	2.70	274H
276H	1 1/4	3/4	1	1 1/4		2 3/8	14 7/8	3 1/2	2.30	3.44	276H
277X	1 7/16	7/8				2 5/8	16 1/2	3 7/8	2.60	3.90	277X
277P	1 1/2		1 1/4	1 1/2	1	2 5/8	16 1/2	3 7/8	2.60	3.90	277P

Weights, page F.

+ REGISTERED TRADE MARK

✦ "SUPERIOR" DROP-FORGED WRENCH SETS
(Carbon Steel)



No. 25



No. 4



No. 2-S


No. 5-S

DISCONTINUED FOR "THE DURATION"

Finished Wrenches are milled, surface smoothed, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

SET No. 25

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Each, Finished	No.
723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4 1/4	$.42	723
25	1/2 & 19/32	1/4 & 5/16	5/16	5/16		5 1/2	.50	25
27C	9/16 & 11/16	3/8	3/8	3/8	5/16	6 1/2	.62	27C
28S	5/8 & 25/32	7/16	7/16	7/16	3/8	7	.74	28S
731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	8 3/4	.90	731A
33C	15/16 & 1		3/4	5/8	5/8	9 1/2	1.10	33C
No. 25 SET	LIST PRICE Complete, In Khaki Roll						$5.28	Set
	In Cardboard Box						4.28	25

For similar Alloy Steel Wrench Set No. 1025, see page 33.

EXTRA CAPACITY SET, "BIG SIX," No. 4

725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5	$.50	725
27C	9/16 & 11/16	3/8	3/8	3/8	5/16	6 1/2	.62	27C
28	19/32 & 25/32	5/16 & 7/16				7	.74	28
729	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7	.74	729
34	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	10 3/4	1.36	34
736	1 & 1 1/4	3/4	3/4	7/8	5/8	12	1.92	736
No. 4 SET	LIST PRICE Complete, In Khaki Roll						$6.88	Set
	In Cardboard Box						5.88	4

LIGHT SERVICE SET No. 2-S

77S	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	7 1/4	$.68	77S
79S	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	8 1/4	.86	79S
81A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9 1/4	1.10	81A
83A	15/16 & 1		3/4	5/8	5/8	10 3/8	1.40	83A
85C	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8		12	2.00	85C
No. 2-S SET	LIST PRICE Complete, In Khaki Roll						$7.04	Set
	In Cardboard Box						6.04	2-S

SET No. 5-S

725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5	$.50	725
727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6	.62	727
731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	8 3/4	.90	731A
33C	15/16 & 1		3/4	5/8	5/8	9 1/2	1.10	33C
37	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8		12	1.92	37
No. 5-S SET	LIST PRICE Complete, In Khaki Roll						$6.04	Set
	In Cardboard Box						5.04	5-S

✦ REGISTERED TRADE MARK

(Continued on following page)

10-42

✦ "SUPERIOR" DROP-FORGED WRENCH SETS
(Carbon Steel)

(Continued from previous page)



No. 1



No. 3



No. 6



No. 9



No. 10

DISCONTINUED FOR THE DURATION.

"LIGHT SERVICE" SET No. 1

No.	Nominal Openings	For Manufacturers' Std. Nuts; Size Bolts	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Extreme Length, Approx.	Thickness of Jaws	LIST PRICE Each, Finished	No.
75	13/32 & 1/2	3/16 & 1/4	3/16 & 1/4	5/16	5/16	6 1/4	1/4	.54	75
77	1/2 & 5/8	1/4 & 5/16	1/4	5/16 & 7/16	5/16 & 7/16	7 1/4	9/32	.68	77
79	5/8 & 11/16	5/16 & 3/8	3/8	7/16	7/16	8 1/4	5/16	.86	79
81	11/16 & 27/32	3/8 & 7/16	3/8			9 1/4	3/8	1.10	81
83	27/32 & 15/16	7/16 & 1/2			5/8	10 3/8	7/16	1.40	83
No. 1 SET	LIST PRICE Complete, In Khaki Roll							$5.38	Set
	In Cardboard Box							4.58	1

"LIGHT SERVICE" SET No. 3

75B	3/8 & 7/16			3/16 & 1/4	1/4	6 1/4	1/4	$.54	75B
77B	1/2 & 9/16		1/4	5/16 & 3/8	5/16 & 3/8	7 1/4	9/32	.68	77B
79	5/8 & 11/16		3/8	7/16	7/16	8 1/4	5/16	.86	79
81B	3/4 & 13/16			1/2 & 9/16	1/2	9 1/4	3/8	1.10	81B
83B	7/8 & 1		1/2	5/8 & 3/4	9/16	10 3/8	7/16	1.40	83B
85B	1 1/8 & 1 1/4		3/4	7/8	7/8	12	1/2	2.00	85B
No. 3 SET	LIST PRICE Complete, In Khaki Roll							$7.58	Set
	In Cardboard Box							6.58	3

"LIGHT SERVICE" SET No. 6

75A	3/8 & 1/2			3/16 & 5/16	5/16	6 1/4	1/4	$.54	75A
77	1/2 & 5/8		1/4	5/16 & 7/16	5/16 & 7/16	7 1/4	9/32	.68	77
79C	5/8 & 3/4			7/16 & 1/2	7/16 & 1/2	8 1/4	5/16	.86	79C
81A	3/4 & 7/8		1/2	1/2 & 5/8	1/2 & 9/16	9 1/4	3/8	1.10	81A
83B	7/8 & 1		1/2	5/8 & 3/4	9/16	10 3/8	7/16	1.40	83B
No. 6 SET	LIST PRICE Complete, In Khaki Roll							$5.38	Set
	In Cardboard Box							4.58	6

"DUPLEX" SET, No. 9

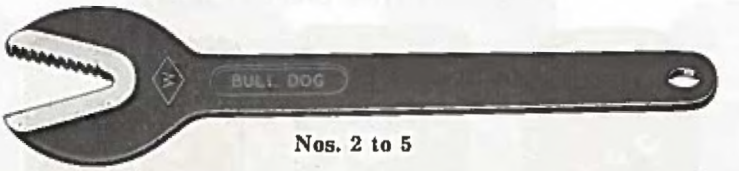
No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Each, Finished	No.
725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5	$.50	725
25	1/2 & 19/32	1/4 & 5/16	5/16	5/16		5 1/2	.50	25
27C	9/16 & 11/16	3/8	3/8	3/8	5/16	6 1/2	.62	27C
28S	5/8 & 25/32	7/16	7/16	7/16	3/8	7	.74	28S
731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	8 3/4	.90	731A
34	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	10 3/4	1.36	34
736	1 & 1 1/4	3/4	3/4	7/8	5/8	12	1.92	736
No. 9 SET	LIST PRICE Complete, In Khaki Roll						$7.79	Set
	In Cardboard Box						6.54	9

EXTRA CAPACITY SET, "BIG TEN," No. 10

721	5/16 & 3/8	1/8	1/8 & 3/16			4	$.34	721
23	13/32 & 1/2	3/16 & 1/4	5/16	5/16		4 5/8	.42	23
725A	7/16 & 9/16		1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	5	.50	725A
27	19/32 & 11/16	5/16 & 3/8				6 1/2	.62	27
729	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7	.74	729
731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	8 3/4	.90	731B
32	25/32 & 31/32	7/16 & 9/16				9 1/2	1.10	32
33C	15/16 &		3/4	5/8	5/8	9 1/2	1.10	33C
737	1 1/8 & 1 1/4	3/4	7/8	7/8	3/4	12	1.92	737
38	1 1/16 & 1 7/16	5/8 & 7/8		3/4 & 1		13 1/2	2.80	38
No. 10 SET	LIST PRICE Complete, In Khaki Roll						$12.19	Set
	In Cardboard Box						10.44	10

✦ REGISTERED TRADE MARK

WILLIAMS' "BULL DOG" WRENCHES



Nos. 2 to 5



No. 1



No. 1 3/4



No. 1 1/2



Twin

"ALWAYS READY" WRENCHES



Designed for all-around service, these wrenches will grip round, square, hexagon or any shape that will fit between their tough jaws.

Drop-forged from a specially fine grade of steel and carefully tempered in oil, these wrenches are practically indestructible.

The handles of "Bull Dog" Nos. 2 and 2 1/2 are concave. "Bull Dog" No. 1 packed 12 in a paper box—all others 6 to a box.

"BULL DOG" WRENCHES

No.	Capacity		Extreme Length	Weight per Doz. Lbs.	LIST PRICE, Each	No.
	Pipe	Rounds				
1	1/8 to 3/8	1/4 to 3/4	5 1/2	3.	$.45	1
1 1/2	1/8 to 1/2	3/8 to 7/8	5 1/2	3.5	.75	1 1/2
1 3/4	1/8 to 3/4	3/8 to 1	7	7.5	1.10	1 3/4
2	1/4 to 3/4	1/2 to 1	9	9.	1.20	2
2 1/2	3/8 to 1	5/8 to 1 1/4	12 1/2	16.5	1.85	2 1/2
3	1/2 to 1 1/4	3/4 to 1 1/2	16	38.	2.80	3
3 1/2	1/2 to 1 1/2	3/4 to 1 3/4	18 3/4	48.	3.70	3 1/2
4	3/4 to 2	1 to 2 1/4	22	97.	5.60	4
4 1/2	1 to 2 1/2	1 1/4 to 2 3/4	24	128.	8.50	4 1/2
5	2 to 3	2 1/4 to 3 1/2	27	158.	11.00	5
Twin	1/8 to 3/4	5/16 to 1	10	13.5	1.90	Twin

"ALWAYS READY" WRENCHES

1	1/8 to 3/8	1/4 to 3/4	5	4.4	$1.25	1
2	1/8 to 1	1/4 to 1 1/4	7	9.	1.55	2
3	1/2 to 1 1/2	3/4 to 2	11 1/2	32.	3.50	3

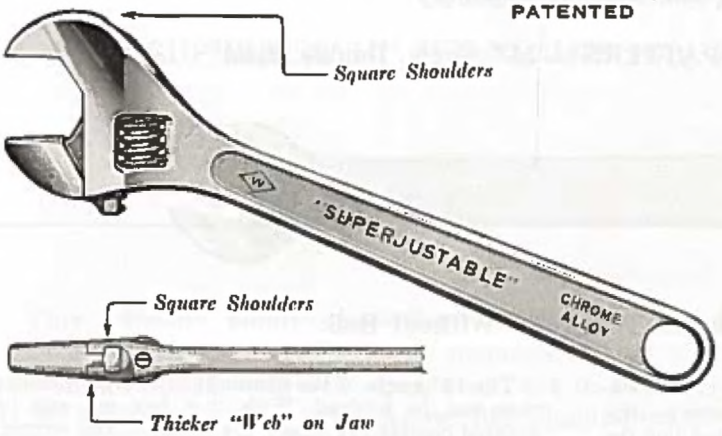
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NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERJUSTABLE" WRENCHES

Chrome-Alloy

PATENTED



REPLACEMENT PARTS ASSORTMENT



Packed in compartment cardboard box containing 88 of the following parts:—

Size	Jaws	Knurls	Pins	Springs
4"	4	4	4	4
6"	6	6	6	6
8"	6	6	6	6
10"	4	4	4	4
12"	2	2	2	2

LIST PRICE

"SUPERJUSTABLE" Assortment.....$20.45

ADJUSTABLE Assortment.....$17.20

Williams' "Superjustable" Wrenches with thin, tapered jaws, are drop-forged from the finest grade of Chrome-Alloy Steel obtainable for the purpose. "Superjustables" are thinner and lighter, yet stronger and tougher than conventional carbon steel adjustable wrenches of similar capacity. They are second to no other alloy steel adjustable wrenches in appearance, strength and durability.

Square shoulders on the shank portion of the sliding jaw provide maximum and positive bearing against working stress. It eliminates entirely the wedging and spreading action, inevitable in wrenches having a cylindrical bearing at this point. The shoulders also permit a thicker "web" on the jaw, for added strength, without increasing the thickness of the wrench head.

All parts are carefully machined to extremely close limits, assuring the accurate fit essential in wrenches of this class. Heat-treatment in recording electric furnaces insures uniformity of product and tough, dependable strength.

Finished in chrome-plate over nickel, with highly polished head; the handle is in "satin" finish. Packed, individually, in cardboard box.

Size, Inch	List Price Finished	List Price Semi-finished	Capacity	Thickness Head Tip of Jaws	Thickness Head Extreme	Net Wgt., Each Lbs.	Net Wgt., Each Oz.	Extra Parts—List Price, Each Jaw	Knurl	Pin	Spring	Size, Inch
"SUPERJUSTABLE"—Alloy Steel												
4	$1.30		1/2	9/64	5/16		1-1/2	$.44	$.18	$.06	$.06	4
6	1.30		3/4	7/32	3/8		3-3/4	.44	.18	.06	.06	6
8	1.60		15/16	17/64	1/2		7-1/2	.56	.21	.06	.06	8
10	2.05		1- 1/8	23/64	19/32		12-1/2	.74	.24	.06	.06	10
12	2.95		1- 5/16	15/32	23/32	1	6-1/2	1.06	.38	.15	.06	12
15	4.45		1- 3/4	19/32	31/32	3	3-1/2	1.60	.62	.15	.06	15
† 18	7.35		2- 1/16	23/32	1- 3/16	6	0	2.20	1.00	.15	.06	† 18

WILLIAMS' ADJUSTABLE WRENCHES

Improved Carbon Steel



These are positively the strongest Carbon Steel Wrenches of their type now made. Their considerably greater strength is due to improved design and materials—no increase in size.

From forgings from a specially strong, tough steel and accurately heat-treated in electric furnaces for uniform, dependable strength.

Finished in natural polished steel; Semi-finished are steel-grit-blasted, heads bright.

Packed individually in cardboard box.

DISCONTINUED FOR "THE DURATION"

Size, Inch	List Price Finished	List Price Semi-finished	Capacity	Thickness Head Tip of Jaws	Thickness Head Extreme	Net Wgt., Each Lbs.	Net Wgt., Each Oz.	Extra Parts—List Price, Each Jaw	Knurl	Pin	Spring	Size, Inch
ADJUSTABLE—Carbon Steel												
4	$1.05	$.02	1/2	9/64	5/16		2	$.35	$.12	.06	$.06	4
6	1.05	.02	3/4	19/64	29/64		5	.35	.15	.06	.06	6
8	1.30	1.15	15/16	3/8	17/32		10	.44	.18	.06	.06	8
10	1.60	1.40	1- 1/8	33/64	23/32		17	.50	.21	.06	.06	10
12	2.45	2.15	1- 5/16	39/64	27/32	1	15	.88	.35	.15	.06	12
† 15	3.30	2.95	1-11/16	27/32	1- 1/8	4	3	1.24	.50	.15	.06	† 15
† 18	4.80	3.80	2- 1/16	15/16	1- 5/16	6	14	1.68	.80	.15	.06	† 18

† "Diamond" Brand.

✦ REGISTERED TRADE MARK

NOTICE— National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' +"SUPERRENCHES"

(Chrome-Molybdenum)

ENGINEERS' PATTERN — 15° Angle, Double Head



Strength and Toughness Without Bulk

These "Superrenches" are particularly serviceable in cramped quarters where clearance is limited. The jaws are long, thin and pointed but the strength is the greatest ever put in a thin wrench. Chrome-Molybdenum steel makes "Superrenches" absolutely dependable — no matter how hard the work.

The 15° angle of the opening is the most efficient that can be devised. With it a hex nut can be rotated completely where the swing of the wrench is limited to only 30°.

Unfinished—Baked light gray enamel.

Finished—Chrome-plated; heads buffed bright.

Whitworth and Metric sizes, see page 127.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length	Thickness Heads	LIST PRICE Unfinished	LIST PRICE Finished	No.
1021S	1/4 & 5/16	1/8	1/8			4 1/2	3/16	DISCONTINUED FOR "THE DURATION"	$.58	1021S
1721	5/16 & 3/8	1/8	1/8 & 3/16							1721
1021	5/16 & 13/32	1/8 & 3/16	1/8							1021
1723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4 7/8	13/64		.58	1723
1023	13/32 & 1/2	3/16 & 1/4	5/16	5/16		5 1/4	7/32		.69	1023
1723A	3/8 & 1/2	1/4	3/16 & 5/16	5/16						1723A
1725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5 5/8	15/64		.82	1725
1725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	6 1/8	1/4		.82	1725B
1025	1/2 & 19/32	1/4 & 5/16	5/16	5/16						1025
1727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6 5/8	17/64		1.00	1727
1027	19/32 & 11/16	5/16 & 3/8				7 1/4	9/32		1.00	1027
1027C	9/16 & 11/16	3/8	3/8	3/8	5/16					1027C
1028S	5/8 & 25/32	7/16	7/16	7/16	3/8	7 7/8	19/64		1.24	1028S
1729	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16					1729
1029	11/16 & 25/32	3/8 & 7/16				8 1/2	5/16		1.24	1029
1731	3/4 & 13/16		1/2 & 9/16	1/2	7/16 & 1/2	9 1/4	11/32		1.65	1731
*1731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16					1731A
1031	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16					1031
1731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16					1731B
1033A	7/8 & 15/16	1/2	5/8	9/16 & 5/8	9/16	10	3/8		1.65	1033A
1033	7/8 & 31/32	1/2 & 9/16	5/8	9/16	9/16					1033
1733	7/8 & 1	1/2	5/8 & 3/4	9/16 & 11/16	9/16 & 5/8	10 7/8	13/32		2.25	1733
1033C	15/16 & 1		3/4	5/8 & 11/16	5/8					1033C
1034A	15/16 & 1 1/16	5/8		5/8 & 3/4		11 3/4	7/16		2.25	1034A
1034	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16					1034
1035	31/32 & 1 1/16	9/16 & 5/8		3/4						1035
*1735	1 & 1 1/8		3/4 & 7/8	11/16	5/8 & 3/4	12 3/4	1/2		3.15	1735
1037	1 1/16 & 1 1/4	5/8 & 3/4		3/4 & 7/8						1037
1737	1 1/8 & 1 1/4	3/4	7/8	7/8	3/4					1737
1037A	1 1/8 & 1 5/16		7/8 & 1		3/4 & 7/8					1037A
1039	1 1/4 & 1 7/16	3/4 & 7/8		7/8 & 1		14	9/16		4.90	1039
1039A	1 5/16 & 1 1/2		1 & 1 1/8		7/8 & 1					1039A
1040	1 1/4 & 1 5/8	3/4 & 1		7/8 & 1 1/8						1040
1041	1 7/16 & 1 5/8	7/8 & 1		1 & 1 1/8		15 3/4	3/4		8.80	1041

*Long "Superrenches" for heavy service, see page 42.

Weights, page I.

+ REGISTERED TRADE MARK

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(Carbon Steel Wrenches, pages 4 and 5)

WILLIAMS' ✦ "SUPERRENCH" SETS
(Chrome-Molybdenum)

"SUPERRENCH" SET No. 1025 FOR GENERAL SERVICE



LIST PRICE, Chrome-Finished:
In Leatherette Roll . . $8.65
In Cardboard Box . . . $7.55

This efficient handy assortment consists of six "Superrenches" with 12 different openings, 3/8 to 1". Service all S.A.E. nuts and cap screws, 1/4 to 11/16", U. S. Std. nuts 1/4 to 1/2", Amer. Std. Regular nuts 1/4 to 5/8", and hex cap screws 3/16 to 3/4".

For similar Carbon Steel Wrench Set No. 25, see page 28.

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	LIST Each, Chrome-Finished	No.
1723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	$.58	1723
1025	1/2 & 19/32	1/4 & 5/16	5/16	5/16		.82	1025
1027C	9/16 & 11/16	3/8	3/8	3/8	5/16	1.00	1027C
1028S	5/8 & 25/32	7/16	7/16	7/16	3/8	1.24	1028S
1731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	1.65	1731A
1033C	15/16 & 1		3/4	5/8 & 11/16	5/8	2.25	1033C

"SUPERRENCH" SET No. 1712—EXTRA CAPACITY



LIST PRICE, Chrome-Finished:
In Leatherette Roll . . $30.20
In Cardboard Box . . . $27.60

DISCONTINUED FOR THE DURATION

An excellent Set for Marine Engineers. Twelve "Superrenches" with 24 different openings, 5/16 to 1-5/8", cover ALL sizes of nuts S.A.E. Std. 1/4 to 1-1/8", U. S. Std. 1/8 to 1", Amer. Std. 1/4 to 1" and cap screws 1/8 to 1-1/8".

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	LIST Each, Chrome-Finished	No.
1021	5/16 & 13/32	1/8 & 3/16	1/8			$.58	1021
1723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	.58	1723
1025	1/2 & 19/32	1/4 & 5/16	5/16	5/16		.82	1025
1727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	1.00	1727
1029	11/16 & 25/32	3/8 & 7/16				1.24	1029
1731	3/4 & 13/16		1/2 & 9/16	1/2	7/16 & 1/2	1.65	1731
1033	7/8 & 31/32	1/2 & 9/16	5/8	9/16	9/16	1.65	1033
1033C	15/16 & 1		3/4	5/8	5/8	2.25	1033C
1037A	1 1/8 & 1 5/16		7/8 & 1		3/4 & 7/8	3.15	1037A
1038	1 1/16 & 1 7/16	5/8 & 7/8		3/4 & 1		4.90	1038
1739B	1 3/8 & 1 1/2		1 1/8		1	4.90	1739B
1040	1 1/4 & 1 5/8	3/4 & 1		7/8 & 1 1/8		4.90	1040

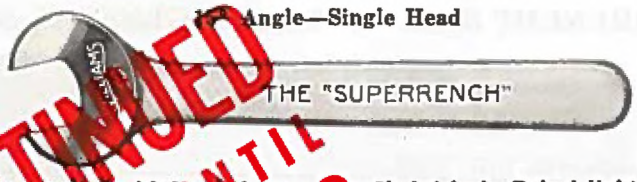
✦ REGISTERED TRADE MARK

WILLIAMS' ✦"SUPERRENCHES"

(Chrome-Molybdenum)

ENGINEERS' PATTERN

15° Angle—Single Head



These wrenches can be supplied with heads bent at angles up to 90° from opening at extra cost.

Unfinished—Baked light gray enamel.
Finished—Chrome-plated; heads buffed bright.

DISCONTINUED WILL SUPPLY UNTIL STOCK IS EXHAUSTED

No.	Nominal Openings	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Extreme Length	Thickness Heads	LIST PRICE Unfinished	LIST PRICE Finished	No.
1000	5/16	1/8	1/8			3 1/2	7/32	$.33	$.47	1000
1700	5/16		3/16			4	1/4	.33	.47	1700
1000A	13/32	3/16								1000A
1701	7/16		1/4	1/4	1/4	4 5/8	9/32	.39	.56	1701
1001	1/2	1/4	5/16	5/16						1001
1702	9/16		3/8	3/8	5/16	5 1/2	5/16	.50	.70	1702
1002	19/32	5/16								1002
1703	5/8		7/16	7/16	3/8	6 3/8	11/32	.62	.85	1703
1003	11/16	3/8								1003
1704	3/4		1/2	1/2	7/16	7 1/4	3/8	.78	1.05	1704
1004	25/32	7/16								1004
1705	13/16		9/16		1/2	8 1/8	7/16	.96	1.25	1705
1005	7/8	1/2	5/8	9/16	9/16					1005
1006A	15/16			5/8		9 1/4	1/2	1.16	1.50	1006A
1006	31/32	9/16								1006
1706	1		3/4	11/16	5/8					1706
1007	1 1/16	5/8		3/4		10 1/2	9/16	1.47	1.88	1007
1707	1 1/8		7/8		3/4					1707
1008	1 1/4	3/4		7/8		12	21/32	2.00	2.50	1008
1008A	1 5/16		1		7/8					1008A
1009	1 7/16	7/8		1		13 1/2	23/32	3.05	3.80	1009
1709	1 1/2		1 1/8		1					1709
1010	1 5/8	1		1 1/8		15	25/32	4.30	5.30	1010
1010A	1 11/16		1 1/4		1 1/8					1010A
1011	1 13/16	1 1/8		1 1/4		16 1/2	7/8	5.65	6.90	1011
1011A	1 7/8				1 1/4					1011A
1012	2	1 1/4		1 3/8		18 1/4	15/16	7.90	9.40	1012
1012A	2 1/16				1 3/8					1012A
1013	2 3/16	1 3/8		1 1/2		20	1	10.35	12.15	1013
1013A	2 1/4				1 1/2					1013A
1014	2 3/8	1 1/2				22	1 1/16	13.00	15.30	1014
1014A	2 7/16				1 5/8					1014A

GENERAL SERVICE PATTERN



Due to the use of Chrome-Molybdenum steel, these "Superrenches" provide increased strength and toughness over the carbon steel wrench of corresponding size. Long, light and efficient. Heat-treated, chrome-finished, heads bright.

Whitworth Standard sizes, see page 127.

DISCONTINUED WILL SUPPLY UNTIL STOCK IS EXHAUSTED

No.	Amer.Std. HEAVY Nut (U.S.S.); Size Bolt	Amer.Std. Hex Cap Screw; Diam. Screw	Amer.Std. LIGHT Nut (S.A.E.); Size Bolt	Amer.Std. REGLR. Nut; Size Bolt	Nominal Openings	LIST PRICE Each, Chrome-Finished
1077H		1/4		1/4	1/4 & 5/16	
1077M	5/16	5/16 & 3/8	5/16		5/16 & 3/8	$.93
1077	3/8	3/8	3/8		3/8 & 7/16	
1077S	1/4	1/4 & 5/16	1/4 & 5/16	1/4	7/16 & 1/2	
1077C		1/4 & 5/16	1/4 & 5/16	1/4 & 5/16	7/16 & 9/16	
1077K		5/16 & 3/8	5/16 & 3/8	5/16 & 3/8	7/16 & 5/8	1.18
1077B	3/8	3/8 & 7/16	3/8 & 7/16	5/16	1/2 & 9/16	
1077	7/16	7/16 & 1/2	7/16 & 1/2	3/8	1/2 & 5/8	
1079B	5/16	3/8		5/16	9/16 & 13/32	
1079S	3/8	3/8 & 7/16	3/8 & 7/16	3/8 & 1/2	9/16 & 5/8	
1079A	7/16	7/16	7/16	7/16	5/8 & 11/16	1.45
1079E		7/16 & 1/2	7/16 & 1/2	7/16 & 9/16	5/8 & 3/4	
1079	1/2	9/16	9/16	1/2	5/8 & 11/16	
1079C		9/16 & 5/8	9/16 & 5/8	9/16 & 5/8	5/8 & 3/4	

No.	Amer.Std. HEAVY Nut (U.S.S.); Size Bolt	Amer.Std. Hex Cap Screw; Diam. Screw	Amer.Std. LIGHT Nut (S.A.E.); Size Bolt	Amer.Std REGLR. Nut; Size Bolt	Nominal Openings	LIST PRICE Each, Chrome-Finished
1081H		7/16 & 9/16	7/16	5/8 & 1/2	5/8 & 13/16	
1081	5/8				13/16 & 27/32	
1081B		1/2 & 9/16	1/2	11/16 & 1/2	3/4 & 13/16	$1.75
1081A	1/2	1/2 & 5/8	1/2 & 9/16	11/16 & 9/16	3/4 & 7/8	
1083K		9/16 & 5/8	9/16	1/2 & 9/16	13/16 & 7/8	
1083J		9/16 & 5/8	11/16	1/2 & 5/8	13/16 & 1	
1083			5/8		27/32 & 15/16	2.30
1083B	1/2	5/8 & 3/4	9/16 & 11/16	9/16 & 5/8	7/8 & 1	
1083A		3/4	5/8 & 11/16	5/8	15/16 & 1	
1085H		5/8 & 7/8	9/16	9/16 & 5/8	7/8 & 1 1/8	
1085		3/4 & 7/8	11/16	5/8 & 3/4	1 & 1 1/8	
1085J		3/4	11/16	5/8 & 7/8	1 & 1 9/16	
1085C	5/8 & 3/4		3/4 & 7/8		1 1/16 & 1 1/4	3.30
1085B	3/4	7/8	7/8	3/4	1 1/8 & 1 1/4	
1085K		7/8 & 1		3/4 & 7/8	1 1/8 & 1 5/16	

Weights, page I.

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✦ REGISTERED TRADE MARK

(Carbon Steel Wrenches, pages 2, 3 and 13)

NOTICE— National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERRENCHES"

(Chrome-Molybdenum)

CONSTRUCTION and STRUCTURAL PATTERNS

Structural Pattern
Straight Opening



Construction Pattern
15° Angle



These wrenches have been made especially to meet the needs of structural workers. The slim design provides ample strength and leverage without unnecessary weight and bulk.

The long, narrow jaws give substantially full bearing on square nuts. The round handle has tapered end for easy insertion into bolt holes when bringing same into line.

In the Structural Pattern, the abrupt offset and angle of handle provide for clearance of obstructions and safety to the operator's hands. The wrench is particularly well balanced. When thrust into scabbard or belt-loop, the "step-up" of the round above the flat part of handle acts as a stop, yet is readily released.

In Structural Wrenches, the openings for U. S. Std. sizes are milled oversize for rough bolts and nuts. This pattern, therefore, has slightly larger openings than corresponding Construction Wrenches.

Drop-forged from Chrome-Molybdenum steel, heat-treated and finished in baked gray enamel all over.

Whitworth Std. sizes, see page 127.

CONSTRUCTION PATTERN							STRUCTURAL PATTERN								
No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	S.A.E. Std. Nut and Cap Screw	Amer. Std. Reg. Nut; Size Bolt	Extreme Length Approx.	List Price, Each	No.	Nominal Opening	For U. S. Std. Nut Size Bolt	Amer. Std. Reg. Nut Size Bolt	Extreme Length, Approx.	Thickness Head	Handle Offset: At Head	Handle Offset: At End	List Price, Each
1203A	5/8		7/16	3/8	12	$1.43	1903A	5/8		3/8	12	7/16	3/4	1-11/16	$ 1.68
*1203	11/16	3/8			12	1.43	1903	†11/16	3/8		12	7/16	3/4	1-11/16	1.68
1205A	13/16			1/2	14 1/2	1.86	1905A	†3/16		1/2	14-1/2	17/32	7/8	1-7/8	2.25
1205	7/8	1/2	9/16	0/16	14 1/2	1.86	*1905	† 7/8	1/2	9/16	14-1/2	17/32	7/8	1-7/8	2.25
1206B	1		11/16	5/8	14 1/2	1.86	1906	1		5/8	14-1/2	17/32	7/8	1-7/8	2.25
*1207	1 1/16	5/8	3/4		17	2.60	*1907	†1- 1/16	5/8		17	5/8	1	2-3/8	3.15
1207A	1 1/8			3/4	17	2.60	1907A	1- 1/8		3/4	17	5/8	1	2-3/8	3.15
*1208	1 1/4	3/4	7/8		19	3.50	*1908	†1- 1/4	3/4		19	11/16	1-1/8	2-3/4	4.25
1208A	1 5/16			7/8	19	3.50	1908A	1- 5/16		7/8	19	11/16	1-1/8	2-3/4	4.25
*1209	1 7/16	7/8	1		21	4.80	*1909	†1- 7/16 1- 1/2	7/8	 1	21 21	3/4 3/4	1-1/4 1-1/4	3-1/16 3-1/16	5.85 5.85
1209A	1 1/2			1	21	4.80	*1910	†1- 5/8 1-11/16	1	 1-1/8	23 23	13/16 13/16	1-7/16 1-7/16	3-3/8 3-3/8	8.10 8.10
1210	1 5/8	1	1 1/8		23	6.80									
1211	1 13/16	1 1/8	1 1/4		25	10.00	1911	†1-13/16 1- 7/8	1-1/8	 1-1/4	25 25	7/8 7/8	1-5/8 1-5/8	3-11/16 3-11/16	12.25 12.25
1212	2	1 1/4	1 3/8		25	10.00	1912	†2	1-1/4		25	7/8	1-5/8	3-11/16	12.25

†Based on U. S. S. Nut Formula. Actual openings are 1/32 to 1/16" larger for proper clearance on rough nuts and bolts.
*Carried in stock with short tangs for oil construction and derrick service. Details on request.

✦ REGISTERED TRADE MARK

Weights, pages I and J.

(Carbon Steel Wrenches, pages 18 and 19)

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERRENCHES"

(Chrome-Molybdenum)

STRUCTURAL BOX PATTERN

With 12-Point Openings



This Williams' Structural Box "Superrench" is designed to bring greater safety to structural work. The 12-point Box Head insures a firm hold on the nut and it is offset to give maximum clearance. The long sturdy tapered handle provides ample strength and leverage, and can easily be inserted into bolt holes to bring them into line.

These rugged wrenches are also adapted to heavy work where unusual leverage is necessary.

Drop-forged from Chrome-Molybdenum steel, heat-treated, and finished in baked gray enamel all over.

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Extreme Length, Approx.	Head		Handle Offset		List Price, Each
				Thickness	Outside Diameter	At Head	At End	
8909	1- 7/16	7/8	21	1	2- 3/8	1- 1/2	2- 3/4	$4.40
8910	1- 5/8	1	22	1-1/16	2- 5/8	1- 5/8	2- 7/8	5.15
8911	1-13/16	1-1/8	23	1-1/8	2-29/32	1-11/16	3	5.50
8912	2	1-1/4	24-1/2	1-1/4	3- 5/32	1-13/16	3- 5/32	5.85
8913	2- 3/16	1-3/8	26	1-3/8	3-15/32	2	3- 1/2	7.65
8914	2- 3/8	1-1/2	28	1-1/2	3-23/32	2- 1/8	3-11/16	8.65

NOTE: These Wrenches can be supplied with heads bent up to 90° right or left of handle at extra charge.

STRIKING FACE BOX—OFFSET PATTERN

With 12-Point Openings



The Striking Face Box "Superrench" is particularly well adapted for heavy work in close quarters where large nuts must be set up tight or frozen nuts loosened.

Offset head gives ample nut clearance. Drop-forged from Chrome-Molybdenum steel, properly heat-treated to withstand the necessary shocks. Finished in baked gray enamel all over.

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Extreme Length Approx.	Head		List Price, Each
					Thickness	Outside Diameter	
8807	1- 1/16	5/8	3/4	10-1/2	13/16	1-27/32	$4.75
8808	1- 1/4	3/4	7/8	11	7/8	2- 3/32	5.00
8809	1- 7/16	7/8	1	11-1/2	1	2- 3/8	6.10
8810	1- 5/8	1	1-1/8	12	1-1/16	2- 5/8	6.85
8811	1-13/16	1-1/8	1-1/4	12-1/2	1-1/8	2-29/32	7.15
8812	2	1-1/4	1-3/8	13	1-1/4	3- 5/32	7.50
8813	2- 3/16	1-3/8	1-1/2	13-1/2	1-3/8	3-15/32	9.35
8814	2- 3/8	1-1/2		14	1-1/2	3-23/32	10.35
8815	2- 9/16	1-5/8		14-1/2	1-5/8	3-29/32	11.50
8816	2- 3/4	1-3/4		15	1-3/4	4- 5/32	12.75

Weights, page J.

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✦ REGISTERED TRADE MARK

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions



WILLIAMS' ✦"SUPERRENCHES"

(Chrome-Molybdenum)

12-POINT BOX PATTERNS FOR CLOSE QUARTERS

12-Point Opening—7½° Angle

These "Superrenches," with thin head walls, are particularly efficient in close quarters. They grip nuts on six sides and prevent slipping. Will rotate hex nuts where the wrench can be swung only 15°—HALF the space required by conventional wrenches.

Made in 2 patterns, as listed below:—

Regular — with thin heads for general service.

Heavy — with heads approximately as thick as the nuts they handle, for extra strength and full bearing in severe service.

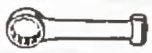
Each pattern is drop-forged from Chrome-Molybdenum steel, heat-treated and furnished in 2 conditions:—

Unfinished — Baked, gray enamel all over; heads not bright.
Finished — Chrome-plated; faces of heads buffed bright.



Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration.

† At additional charge Heavy Pattern wrenches are also furnished with "striking-face" on end of handle, as illustrated; lengths listed below:—





	Nos.	H1808 H1808A	H1809 H1809A	H1810 H1810A	H1811 H1811A	H1812	H1813 H1813A	H1814	H1815 H1815A	H1816	H1817A H1817
Regular	Length	7	8	9	10	11	12	13	14	15	17

Heavy

No.	Nominal Opening Across Flats	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S. A. E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Extreme Length, Approx.	Head: Thickness	Head: Outside Diameter	LIST PRICE: Unfinished	LIST PRICE: Finished
REGULAR PATTERN—12-POINT OPENING										
1800A	7/16		1/4	1/4	1/4	3 1/2	7/32	45/64		$.61
1801	1/2	1/4	5/16	5/16		4	17/64	27/32		.73
1802A	9/16		3/8	3/8	5/16	4 7/8	5/16	31/32		.86
1802	19/32	5/16				4 7/8	5/16	63/64		.86
1803A	5/8		7/16	7/16	3/8	5 7/8	23/64	1 1/16		1.00
1803	11/16	3/8				5 7/8	23/64	1 9/64		1.00
1804A	3/4		1/2	1/2	7/16	6 7/8	11/32	1 1/4		1.15
1804	25/32	7/16				6 7/8	11/32	1 3/8		1.15
1805A	13/16		9/16		1/2	7 3/4	25/64	1 3/8		1.40
1805	7/8	1/2	5/8	9/16	9/16	7 3/4	25/64	1 1/2		1.40
1806A	15/16			5/8		8 3/4	7/16	1 9/16		1.70
1806	31/32	9/16				8 3/4	7/16	1 11/16		1.70
1806B	1		3/4	11/16	5/8	8 3/4	7/16	1 11/16		1.70
1807	1 1/16	5/8		3/4		9 7/8	9/16	1 25/32		2.05
1807A	1 1/8		7/8		3/4	9 7/8	9/16	1 25/32		2.05
1808	1 1/4	3/4		7/8		11 1/2	9/16	2 1/16		2.60
1808A	1 5/16		1		7/8	11 1/2	9/16	2 1/16		2.60
1809	1 7/16	7/8		1		13 3/8	21/32	2 3/8		3.50
1809A	1 1/2		1 1/8		1	13 3/8	21/32	2 3/8		3.50
1810	1 5/8	1		1 1/8		15 1/4	3/4	2 5/8		4.70
1810A	1 11/16		1 1/4		1 1/8	15 1/4	3/4	2 5/8		4.70
1811	1 13/16	1 1/8		1 1/4		17	13/16	2 7/8		6.20
1811A	1 7/8				1 1/4	17	13/16	2 7/8		6.20
1812	2	1 1/4		1 3/8		19	15/16	3 1/4		8.05
HEAVY PATTERN—12-POINT OPENING										
†H1808	1 1/4	3/4		7/8		11 1/2	13/16	2 1/16		3.45
†H1808A	1 5/16		1		7/8	11 1/2	13/16	2 1/16		3.45
†H1809	1 7/16	7/8		1		13 3/8	15/16	2 3/8		4.65
†H1809A	1 1/2		1 1/8		1	13 3/8	15/16	2 3/8		4.65
†H1810	1 5/8	1		1 1/8		15 1/4	1 1/8	2 5/8		6.25
†H1810A	1 11/16		1 1/4		1 1/8	15 1/4	1 1/8	2 5/8		6.25
†H1811	1 13/16	1 1/8		1 1/4		17	1 1/4	2 15/16		8.25
†H1811A	1 7/8				1 1/4	17	1 1/4	2 15/16		8.25
†H1812	2	1 1/4		1 3/8		19	1 3/8	3 1/4		10.70
†H1813	2 3/16	1 3/8		1 1/2		21	1 1/2	3 1/2		13.55
†H1813A	2 1/4				1 1/2	21	1 1/2	3 1/2		13.55
†H1814	2 3/8	1 1/2				23	1 5/8	3 3/4		16.90
†H1815	2 9/16	1 5/8				25	1 3/4	4 1/8		28.05
†H1815A	2 5/8				1 3/4	25	1 3/4	4 1/8		28.05
†H1816	2 3/4	1 3/4				27	1 7/8	4 9/16		40.20
†H1817A	3				2	30	2	4 13/16		55.00
†H1817	3 1/8	2				30	2	4 13/16		55.00

DISCONTINUED FOR "THE DURATION"

Weights, pages I and J.

✦REGISTERED TRADE MARK

(Carbon Steel Wrenches, pages 8-A and 9)

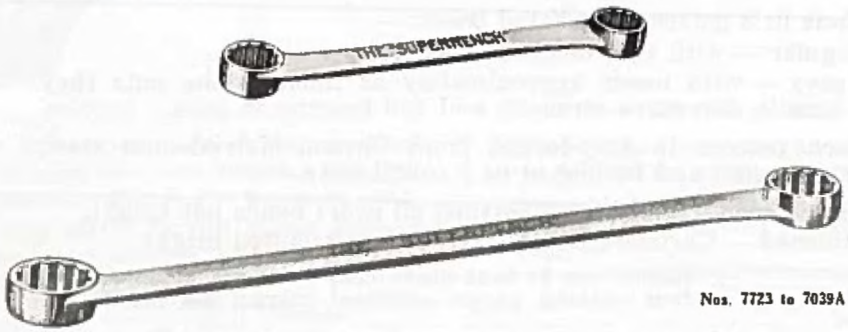
NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' 12-POINT-BOX ✦"SUPERRENCHES"

(Chrome-Molybdenum)

15° ANGLE OFFSET PATTERNS

Nos. 6723 to 6727



Nos. 7723 to 7039A

These 12-Point Box "Superrenches" are particularly well adapted to work in close quarters. Thin head walls permit use where clearance is extremely limited. The openings grip hex nuts on six sides, preventing all slipping and rounding of the nut's corners. The Long Pattern provides unusual reach and leverage.

Each head has a 12-point opening; consequently, hex nuts can be completely rotated where the swing of the wrench is limited to 30°—less than 1/10 of a full turn.

GENUINE "SUPERRENCHES," forged from Chrome-Molybdenum steel, heat-treated and furnished in 2 conditions:

Unfinished—Baked light gray enamel.
Finished—Chrome-plated over nickel.

Supplied in Whitworth Standard sizes also; details on request.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U. S. S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S. A. E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
LONG PATTERN—Different Opening in Each Head									
7723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	7-3/8		$.95	7723
7725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	7-3/4		.95	7725
7725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	8-1/4		1.00	7725B
7025	1/2 & 19/32	1/4 & 5/16	5/16	5/16		8-1/4		1.00	7025
7727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9-1/4		1.05	7727
7727A	5/8 & 11/16	3/8	7/16	7/16	3/8	10-1/2		1.20	7727A
7729	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	10-1/2		1.20	7729
7729A	3/4 & 25/32	7/16	1/2	1/2	7/16	12		1.40	7729A
7731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12		1.40	7731A
7731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	12		1.55	7731B
7033	7/8 & 31/32	1/2 & 9/16	5/8	9/16	9/16	13-3/4		1.85	7033
7033C	15/16 & 1		3/4	5/8 & 11/16	5/8	13-3/4		1.85	7033C
7735A	1-1/16 & 1-1/8	5/8	7/8	3/4	3/4	17-1/4		3.30	7735A
*7737	1-1/8 & 1-1/4	3/4	7/8	7/8	3/4	19		3.80	7737
7039	1-1/4 & 1-7/16	3/4 & 7/8		7/8 & 1		19		3.80	7039
7039A	1-5/16 & 1-1/2		1 & 1-1/8		7/8 & 1	19		3.80	7039A
SHORT PATTERN—Different Opening in Each Head									
6723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4-1/2		$.95	6723
6725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5-1/2		1.00	6725
6725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5-1/2		1.00	6725B
6727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6		1.10	6727

DISCONTINUED FOR "THE DURATION"

* Has thicker head walls for severe service.

For handy, economical Sets, see page 40.

Weights, page J.

✦ REGISTERED TRADE MARK

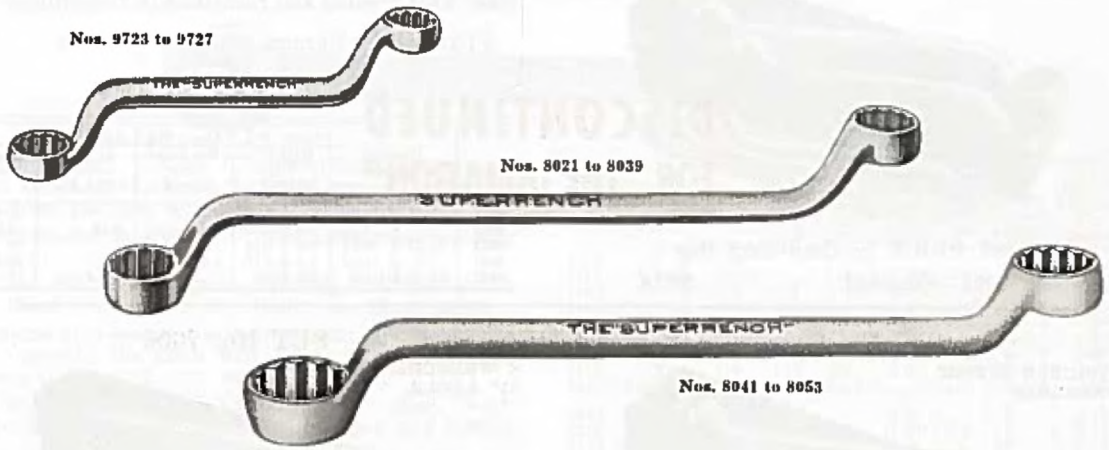
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NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' 12-POINT-BOX +"SUPERRENCHES"

(Chrome-Molybdenum)

DOUBLE OFFSET PATTERNS



These 12-Point Box "Superrenches" are particularly well adapted to work in close quarters. Thin head walls permit use where clearance is extremely limited. The openings grip hex nuts on six sides, preventing all slipping and rounding of the nut's corners. The Long Pattern provides unusual reach and leverage.

Each head has a 12-point opening; consequently, hex nuts can be completely rotated where the swing of the wrench is limited to 30°—less than 1/10 of a full turn.

GENUINE "SUPERRENCHES," forged from Chrome-Molybdenum steel, heat-treated, and furnished in 2 conditions as follows:—

Unfinished—Baked light gray enamel.
Finished—Chrome-plated over nickel.

Supplied in Whitworth Standard and Metric sizes also; details on request.

No.	Nominal Openings	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screws; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Extreme Length, Approx.	LIST PRICE Unfinished	LIST PRICE Finished	No.
LONG PATTERN—Different Opening in Each Head									
8021	5/16 & 13/32	1/8 & 3/16	1/8			7-1/4		$.80	8021
8723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	7-3/4		.95	8723
8725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	8-1/4		.95	8725
8725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	8-3/4		1.00	8725B
8025	1/2 & 19/32	1/4 & 5/16	5/16	5/16		8-3/4		1.00	8025
8727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9-3/4		1.05	8727
8727A	5/8 & 11/16	3/8	7/16	7/16	3/8	11		1.20	8727A
8729	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	11		1.20	8729
8729A	3/4 & 25/32	7/16	1/2	1/2	7/16	12-1/2		1.40	8729A
8731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12-1/2		1.40	8731A
8731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	12-1/2		1.40	8731B
8033	7/8 & 31/32	1/2 & 9/16	5/8	9/16	9/16	13-1/2		1.65	8033
8033C	15/16 & 1		3/4	5/8 & 11/16	5/8	14-1/2		1.85	8033C
8735A	1-1/16 & 1-1/8	5/8	7/8	3/4	3/4	17		3.30	8735A
8039	1-1/4 & 1-7/16	3/4 & 7/8		7/8 & 1		19		3.80	8039
8039A	1-5/16 & 1-1/2		1 & 1-1/8		7/8 & 1	19		3.80	8039A
FOR HEAVY SERVICE—LONG PATTERN—Round Handle									
8041	1- 7/16 & 1-5/8	7/8 & 1		1 & 1-1/8		23		4.95	8041
8045	1-13/16 & 2	1-1/8 & 1-1/4		1-1/4 & 1-3/8		25		8.45	8045
8049	2-3/16 & 2-3/8	1-3/8 & 1-1/2		1-1/2		27		10.60	8049
8053	2-9/16 & 2-3/4	1-5/8 & 1-3/4				30		16.25	8053
SHORT PATTERN—Different Opening in Each Head									
9723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4-1/2		.95	9723
9725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5-1/2		1.00	9725
9725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5-1/2		1.00	9725B
9727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6		1.10	9727

DISCONTINUED FOR "THE DURATION"

For handy, economical Sets, see page 40.

Weights, page J.

+ REGISTERED TRADE MARK

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

12-POINT BOX +"SUPERRENCH" SETS

(Chrome-Molybdenum)

SET No. 8005 — LONG WRENCHES

5 DOUBLE OFFSET WRENCHES



DISCONTINUED FOR "THE DURATION"

Genuine "Superrenches"—Chrome-Molybdenum steel, heat-treated and furnished in 2 conditions:—

FINISHED—Chrome-plated over nickel.

LIST PRICE, in Cardboard Box

SET 8005—Finished $8.10

Contents of Set No. 8005

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Length Approx.
8021	5/16 & 13/32	1/8 & 3/16	1/8		7-1/4
8025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	8-3/4
8029	11/16 & 25/32	3/8 & 7/16			11
8033	7/8 & 31/32	1/2 & 9/16	5/8	9/16	13-1/2
8037	1-1/16 & 1-1/4	5/8 & 3/4		3/4 & 7/8	17

SET No. 8006 — LONG WRENCHES — SET No. 7006

6 DOUBLE OFFSET WRENCHES



DISCONTINUED FOR "THE DURATION"

LIST PRICE, in Cardboard Box

SET 8006—Finished $7.60

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Length Approx.
8723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	7-3/4
8025	1/2 & 19/32	1/4 & 5/16	5/16	5/16		8-3/4
8727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9-3/4
8029	11/16 & 25/32	3/8 & 7/16				11
8731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12-1/2
8033C	15/16 & 1		3/4	5/8 & 11/16	5/8	14-1/2

6 WRENCHES 15° ANGLE



DISCONTINUED FOR "THE DURATION"

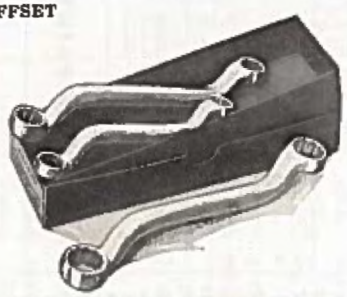
LIST PRICE, in Cardboard Box

SET 7006—Finished $7.60

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Length Approx
7723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	7-3/8
7025	1/2 & 19/32	1/4 & 5/16	5/16	5/16		8-1/4
7727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9-1/4
7029	11/16 & 25/32	3/8 & 7/16				10-1/2
7731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12
7033C	15/16 & 1		3/4	5/8 & 11/16	5/8	13-3/4

SET No. 9703 — SHORT WRENCHES — SET No. 6703

3 DOUBLE OFFSET WRENCHES



LIST PRICE, in Cardboard Box

SET 9703—Finished $3.05

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Length Approx.
9723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4-1/2
*9725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5-1/2
*9725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5-1/2
9727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6

*Wrench No. 9725 is regularly supplied in Set, but No. 9725B may be substituted, if desired.

3 WRENCHES 15° ANGLE



LIST PRICE, in Cardboard Box

SET 6703—Finished $3.05

No.	Nominal Openings	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Length Approx
6723	3/8 & 7/16		3/16 & 1/4	1/4	1/4	4-1/2
*6725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5-1/2
*6725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5-1/2
6727	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6

*Wrench No. 6725 is regularly supplied in Set, but No. 6725B may be substituted, if desired.

For Set 8105, Single Offset Pattern, see opposite page

+ REGISTERED TRADE MARK

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WILLIAMS' + "SUPERRENCHES"

(Chrome-Molybdenum)

OPEN END-BOX PATTERN

For Close Quarters



These long, slender "Superrenches", combining two styles of head, are designed especially for use in close quarters and tight corners.

Open end is thin, with slim jaws and opening at angle of 15°.

Box end, with 12-point opening and thin walls, is offset from plane of handle; see illustration.

Same size opening in both heads; where one can not operate, the other will. Each rotates hex nuts when the wrench can swing only 30°.

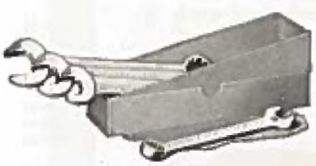
Drop-forged from Chrome-Alloy steel, heat-treated, chrome-plated; faces of open end buffed.

Sold individually and in Sets.

Whitworth Std. sizes also; details on request.

No.	Nominal Openings	Amer. Std. Heavy Nut (U.S.S.)	Amer. Std. Hex Cap Screw	Amer. Std. Light Nut (S.A.E.)	Amer. Std. Regr. Nut	Extreme Length, Approx.	LIST PRICE, Chrome-Finished
1160	3/8 & 3/8		3/16			5	$1.15
1161	7/16 & 7/16		1/4	1/4	1/4	5-3/8	1.18
1162	1/2 & 1/2	1/4	5/16	5/16		6	1.28
1163	9/16 & 9/16		3/8	3/8	5/16	6-3/4	1.40
1164	5/8 & 5/8		7/16	7/16	3/8	7-5/8	1.55
1165	11/16 & 11/16	3/8				8-1/2	1.70
1166	3/4 & 3/4		1/2	1/2	7/16	9-1/2	1.85
1167	7/8 & 7/8	1/2	5/8	9/16	9/16	10-1/2	2.00
1167A	13/16 & 13/16		9/16		1/2	10-1/2	2.00
1168	15/16 & 15/16			5/8		13	2.15
1170	1 & 1		3/4	11/16	5/8	13	2.15
1171	1-1/16 & 1-1/16	5/8		3/4		15	2.40
1173	1-1/4 & 1-1/4	3/4		7/8		18	2.90
1176	1-7/16 & 1-7/16	7/8		1		21	3.45

OPEN END-BOX SETS



SET No. 1168-S

List Price $5.40

Complete in Cardboard Box

Set No. 1168-S with 4 wrenches, 1 each Nos. 1161, 1162, 1163 and 1164, covers all the more popular small sizes of various nuts and cap-screws; see table above.

SET No. 1169-S

LIST PRICE

In Leatherette Roll

$10.05

In Cardboard Box

$8.95



Set No. 1169-S contains 6 wrenches, 1 each, Nos. 1161, 1162, 1163, 1164, 1165 and 1166, and will service 16 different sizes of nuts and cap-screws; see table above. All are popular sizes.

SINGLE OFFSET 12-POINT BOX PATTERN





DISCONTINUED FOR "THE DURATION"

LIST PRICE OF SETS

No. 8105—Finished $7.80

No. 8105U—Unfinished 7.00

In Cardboard Box

5 Wrenches as listed below

Sets Nos. 8105, 8105U

These 12-point Box "Superrenches", with the same opening in both heads, are unusually efficient in tight corners and close quarters. The straight head rotates hex nuts where the wrench swings but 15°; the offset end requires only 30° — less than 1/10 of a full turn. Where one head cannot operate, the other will. Length, 8-1/2" to 12". Furnished in 2 styles of finish:—

Finished—Chrome-plated over nickel.

Unfinished—Baked light gray enamel.

Sold individually and in Sets.

Finished will be supplied, unless otherwise specified.

No.	Nominal Openings	Amer. Std. Heavy Nut (U.S.S.)	Amer. Std. Hex Cap Screw	Amer. Std. Light Nut (S.A.E.)	Amer. Std. Regr. Nut	List Price Unfinished	List Price Finished
8128	7/16 & 7/16		1/4	1/4	1/4	$1.20	$1.35
8132	1/2 & 1/2	1/4	5/16	5/16		1.30	1.45
8136	9/16 & 9/16		3/8	3/8	5/16	1.40	1.55
8140	5/8 & 5/8		7/16	7/16	3/8	1.50	1.65
8148	3/4 & 3/4		1/2	1/2	7/16	1.60	1.80

Weights, pages I and J.

+ REGISTERED TRADE MARK

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' +"SUPERRENCHES"
(Chrome-Molybdenum)

ADJUSTABLE HOOK SPANNERS



Three sizes of Spanners offer an unusual combination of strength and ready adjustment, fitting all rounds from 3/4" to 4-3/4" diameter.

Drop-forged from Chrome-Molybdenum Steel, heat-treated and chrome-plated. Face of jaw and knurled part of handle polished bright. Sold individually and in Set.

SET No. 1400

This Set covers a wide field of usefulness. It is especially serviceable on spindle bearings of lathes, milling machines and grinding machines. Also for adjusting collars and slotted lock nuts and rings used on many types of automatic machines.

No.	Capacity for Circle Diameter	Extreme Length, Approx.	Thickness: Handle	Thickness: Hook	Depth Hook	List Each, Chrome-plated
1471	3/4 to 2	6 3/8	1/4	11/32	1/8	$3.05
1472	1 1/4 to 3	8 1/8	9/32	13/32	5/32	3.50
1474	2 to 4 3/4	11 3/8	5/16	15/32	3/16	4.85
No. 1400 SET—In Leatherette Roll						12.10

Carbon Steel Wrenches, page 23.

WILLIAMS' "MULTISOCKET" WRENCH

EIGHT-IN-ONE
PATENTED





DISPLAY CARD
12-1/2 x 14-3/4"
With Easel Back.
Free with Purchase of Wrenches.

No. 1090 — List Price — $4.00 each

8 Different 12-Point Openings
Small Head; 7/16, 1/2, 9/16, 19/32"
Large Head; 5/8, 11/16, 3/4, 7/8"

The openings grip hex nuts on six sides; no slipping or rounding of the nuts' corners.

Swivel heads, with index spring to retain working opening in position for use, permit handle to be operated at practically any angle desired. Can be used as a socket wrench.

The entire wrench is drop-forged, heat-treated and finished in cadmium-plate. Length, 9 inches. Weights, pages I and J.

+ REGISTERED TRADE MARK

EXTRA LONG THIN PATTERN

15° Angle

Thin — Light — Strong



These extra long (12-1/2") wrenches are slender and light for easy adjustment, and narrow jawed for close places. Openings range from 3/8 to 5/8". All heads 3/16" thick.

Sold individually and in sets.

Drop-forged from special Chrome-Alloy steel, and heat-treated for maximum strength. Cadmium-plated.

No.	Nominal Opening	Amer. Std. HexHd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	List Price Each
A100C	3/8	3/16			$1.18
A100	7/16	1/4	1/4	1/4	1.18
A100A	1/2	5/16	5/16		1.18
A100B	9/16	3/8	3/8	5/16	1.18
A101	5/8	7/16	7/16	3/8	1.27

Set No. 106—6 wrenches; 2 each of Nos. A100A, A100B and A101.

Set No. 108—8 wrenches; 2 each of Nos. A100, A100A, A100B and A101.



Set No. 106

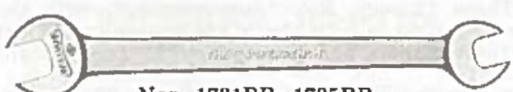


Set No. 108

LIST PRICE	No. 106	No. 108
In Leatherette Roll	$7.85	$10.30
In Cardboard Box	7.25	9.60

LONG DOUBLE HEAD PATTERN

Long Pattern for heavy service where maximum leverage is desirable. Chrome-Finished with heads buffed bright.



Nos. 1731BR, 1735BR

No.	Nominal Openings	Amer. Std. Hex Head Cap Screws	Amer. Std. Regular Nuts	Lgth.	Thick. Heads	List Price
1731BR	3/4 & 7/8	1/2 & 5/8	7/16 & 9/16	15	3/8	$4.30
1735BR	1 & 1-1/8	3/4 & 7/8	5/8 & 3/4	16	1/2	5.75

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DISCONTINUED FOR THE DURATION
DISCONTINUED FOR THE DURATION

WILLIAMS' +"SUPERRENCHES"

(Chrome-Molybdenum)

LIGHT THIN PATTERN—15° Angle, Double Head



LIGHT — THIN — STRONG

Different Opening in Each Head

These light, thin, double head Wrenches are slender and narrow jawed for easy adjustment in close quarters. The 15° angle of opening is unequalled in efficiency.

Drop-forged from special Chrome-Molybdenum steel, heat-treated, chrome-finished, heads buffed bright. Whitworth Std. sizes also; details on request.

No.	Nominal Openings	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Extreme Length	Thickness Heads	LIST PRICE, Chrome-Finished	No.
1090A	3/8 & 7/16		3/16 & 1/4	1/4	1/4	8	5/32	$.76	1090A
1090B	13/32 & 1/2	3/16 & 1/4	5/16	5/16		8	5/32	.76	1090B
1090	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	8	5/32	.76	1090
1090C	7/16 & 9/16		1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	8	5/32	.76	1090C
1090F	1/2 & 17/32	1/4	5/16	5/16		8	5/32	.76	1090F
1090D	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	8	5/32	.76	1090D
1090E	1/2 & 19/32	1/4 & 5/16	5/16	5/16		8	5/32	.76	1090E
1092B	1/2 & 11/16	1/4 & 3/8	5/16	5/16		8	3/16	.82	1092B
1092	9/16 & 5/8		3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	8	3/16	.82	1092
1092C	9/16 & 21/32		3/8	3/8	5/16	8	3/16	.82	1092C
1092D	19/32 & 11/16	5/16 & 3/8				8	3/16	.82	1092D
1092F	5/8 & 11/16	3/8	7/16	7/16	3/8	8	3/16	.82	1092F
1094A	5/8 & 3/4		7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	9	7/32	.88	1094A
1094B	19/32 & 25/32	5/16 & 7/16				9	7/32	.88	1094B
1094D	11/16 & 25/32	3/8 & 7/16				9	7/32	.88	1094D
1094F	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	9	7/32	.88	1094F
1094G	3/4 & 13/16		1/2 & 9/16	1/2	7/16 & 1/2	9	7/32	.88	1094G
1094	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9	7/32	.88	1094
1096A	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	9	7/32	1.06	1096A
1096H	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	9	7/32	1.06	1096H
1096	15/16 & 1		3/4	5/8	5/8	9	7/32	1.06	1096

OFFSET SOCKET "SUPERRENCH"

(Chrome-Molybdenum)

This heavy duty "Superrench" was especially designed for cracking-unit service in Oil Refineries. It is also well adapted for heavy industrial service.

Forged from Chrome-Molybdenum steel, heat-treated and finished in baked gray enamel.



No.	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. LIGHT Nut (S.A.E.)	Nominal Opening Across Flats	Diam. of Head	Extreme Length, Approx.	Handle Offset in Clear	LIST PRICE Each	No.
2273	5/8	3/4	1 1/16	1 3/4	11 5/8	2 3/4	$ 4.80	2273
2274	3/4	7/8	1 1/4	2	12 3/8	2 7/8	5.40	2274
2276	7/8	1	1 7/16	2 1/4	14 7/8	3 1/2	6.50	2276
2277	1	1 1/8	1 5/8	2 1/2	16 1/2	3 7/8	7.75	2277
2278	1 1/8	1 1/4	1 13/16	2 3/4	18 1/4	4 3/8	9.25	2278
2279	1 1/4	1 3/8	2	3	20	4 7/8	11.00	2279
2280	1 3/8	1 1/2	2 3/16	3 3/16	21 3/4	5 3/8	14.00	2280
2280A	1 1/2		2 3/8	3 3/8	21 3/4	5 3/8	14.00	2280A

Carbon Steel Offset Socket Wrenches, page 26

Weights, pages I and J.

+REGISTERED TRADE MARK

WILLIAMS' MIDGET ✦"SUPERRENCHES"

(Chrome-Molybdenum)



Nos. 1106—1109



Nos. 1112—1132

Midget "Superrenches" are unusually thin and slim, but surprisingly tough and strong. On generators, wiring-connections, radios, all delicate adjustments and in the closest quarters, these wrenches are invaluable.

Made in two styles as follows:—

Nos. 1106 to 1109 have two different openings at 15° angle.

Nos. 1112 to 1132 have both openings in each wrench of the same size, *but at different angles* (15° *and* 75°)—*where one head cannot operate, the other will.*

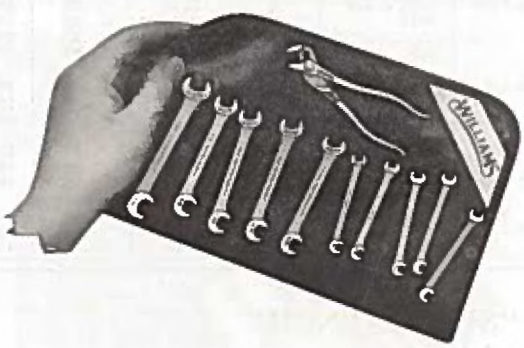
Genuine "Superrenches," Chrome-Molybdenum steel, heat-treated, chrome-plated.

No.	Nominal Openings	Extreme Length	Thickness Heads	LIST PRICE	No.
	15° ANGLE OPENING				
1106	13/64 & 7/32	3	3/32	$.65	1106
1107	15/64 & 1/4	3	3/32	.65	1107
1108	9/32 & 11/32	3-1/2	1/8	.72	1108
1109	5/16 & 3/8	3-1/2	1/8	.72	1109
	15-75° ANGLE OPENING				
1112	3/16 & 3/16	3	3/32	$.65	1112
1113	13/64 & 13/64			.65	1113
1114	7/32 & 7/32			.65	1114
1115	15/64 & 15/64			.65	1115
1116	1/4 & 1/4			.65	1116
1118	9/32 & 9/32	3-3/4	1/8	.72	1118
1120	5/16 & 5/16			.72	1120
1122	11/32 & 11/32			.72	1122
1124	3/8 & 3/8			.72	1124
1128	7/16 & 7/16	4-1/2	5/32	.82	1128
1132	1/2 & 1/2			.82	1132

Supplied in handy Sets also; see below.

MIDGET "SUPERRENCH" ELECTRICAL SETS

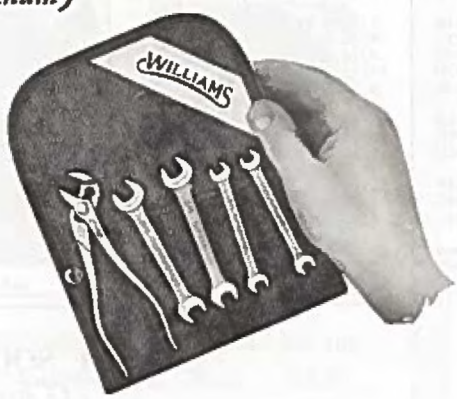
(Chrome-Molybdenum)



LIST PRICES
Complete in Leatherette Roll

SET 1140P—with "Superplier" No. 1519.....$9.30
SET 1140 —without "Superplier" 7.45
Set 1140P furnished, unless otherwise specified.

An assortment of 10 Midget "Superrenches," Nos. 1112, 1113, 1114, 1115, 1116, 1118, 1120, 1122, 1124, 1128 and "Superplier" 1519, for those troublesome little jobs requiring small tools that are a *help*—not a hindrance.



SET No. 1148P—LIST PRICE, $5.15
Complete in Leatherette Roll

A compact, handy assortment of four midget size "Superrenches," Nos. 1106, 1107, 1108, 1109, and "Superplier" No. 1519 at very moderate price. All are especially designed for use in connection with wiring, panels and switchboards, radios and the innumerable jobs requiring small but strong tools with thin, slim jaws.

Midget "Superplier" No. 1519, with 4-position slip-joint, has an opening range from 0 to 9/16". The jaws are parallel at the most important openings, thus minimizing injury to nuts. The handles, with slightly flared ends, provide ideal finger control. Drop-forged from Chrome-Alloy steel, heat-treated, cadmium finished. Length, 4-1/2". See page 71.

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Weights, page I.

✦ REGISTERED TRADE MARK

WILLIAMS' REFRIGERATION WRENCHES

WILLIAMS' RATCHET WRENCHES

(Drop-Forged—Chrome-plated)



Especially efficient for speedy and accurate adjustment of all valves.

No. B-50A — List Price, $3.60

Has 1/4" square drive-opening in ratchet; also, 1/4" sq. hole near end of handle. Length, 6-1/2".

No. B-50B — List Price, $3.30

Has 5/16" sq. ratchet drive-open'g. Lgth. 6-1/2".

WILLIAMS' "SUPERJUSTABLE" WRENCHES

(Chrome-Alloy)



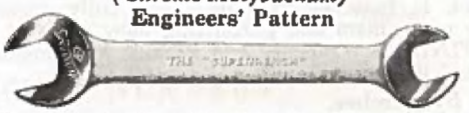
Drop-forged from Chrome-Alloy Steel, "Superjustables" are thin and light, yet strong and tough. Square shoulders on Sliding Jaw shank permit heavier, stronger "web" with no increase in head thickness. Chrome-plated.

Size, Inch.	List Price, Each	Capacity	Thickness Head		Extra Parts—Price, Each			
			Tip of Jaws	Extreme	Jaw	Knurl	Pin	Spring
4	$1.30	1/2	9/64	5/16	$.44	$.18	$.06	$.06
6	1.30	3/4	7/32	3/8	.44	.18	.06	.06
8	1.60	15/16	17/64	1/2	.56	.21	.06	.06
10	2.05	1-1/8	23/64	19/32	.74	.24	.06	.06
12	2.95	1-5/16	15/32	23/32	1.06	.38	.15	.06

WILLIAMS' "SUPERRENCHES"

(Chrome-Molybdenum)

Engineers' Pattern



"Superrenches", with thin heads and narrow, pointed jaws are particularly well adapted to work in close quarters. Amazingly strong.

Heat-treated, chrome-plated, heads buffed.

Fifty other sizes; openings 5/16 to 1-5/8".

No.	Nominal Openings	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Extreme Lgth.	List Price, Each
1723	3/8 & 7/16	1/8 & 1/4	1/4	1/4	4 7/8	$.58
1725B	1/2 & 9/16	1/8 & 3/8	5/16 & 3/8	5/16	6 1/8	.82
1729	5/8 & 3/4	1/8 & 1/2	7/16 & 1/2	3/8 & 7/16	7 7/8	1.24
1733	7/8 & 1	5/8 & 3/4	9/16 & 11/16	9/16 & 5/8	10 3/8	2.25

WILLIAMS' "SUPERPLIERS"

No. 1520



List Price, $2.20

For general refrigeration use and especially serviceable on Frigidaire expansion valves. Slip joint — 8 adjustments. Jaws close entirely, grip any thickness up to 2". Knurled handles provide firm hand grip.

Drop-forged from special Chrome-Alloy steel and heat-treated. Gray satin finish, faces polished. Length, 9-1/2".

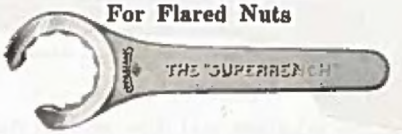
For Refrigeration "Supersocket" Set see page 65

WILLIAMS' "SUPERRENCHES"

(Chrome-Molybdenum)

Open-Box Pattern

For Flared Nuts



Thin heads and narrow jaws permit easy operation in close quarters. 12-point openings turn the nut readily where "Superrenches" can be swung only 30°. Gripping power is more than double that of ordinary wrenches—will not slip.

Drop-forged from Chrome-Molybdenum steel, heat-treated and chrome-plated, heads buffed.

No.	Nominal Opening	Thickness Heads	Extreme Length	List Price, Each	No.
8924	3/4	1/4	6-1/2	$1.15	8924
8928	7/8	1/4	6-1/2	1.15	8928
8930	15/16	1/4	6-1/2	1.15	8930
8932	1	1/4	6-1/2	1.15	8932
8934	1-1/16	1/4	6-1/2	1.15	8934
8936	1-1/8	1/4	6-1/2	1.15	8936

WILLIAMS' "SUPERIOR" SOCKET WRENCHES

(Carbon Steel)



Slim, light design, forged from a special grade of strong, tough carbon steel. Heat-treated and finished in black enamel, baked on; face of head, polished bright.

Many other sizes, both Square and Hex openings, in stock. Modified lengths to order in reasonable quantities.

SQUARE OPENINGS

No.	Nominal Openg.	For Set Screw	For Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Diam. of Head	List Price, Each
960H	1/8	1/8				5/16	$.70
961H	3/16	3/16				1/2	.80
961J	1/4	1/4				1/2	.80
962H	5/16	5/16				5/8	.88
963H	3/8	3/8	1/4			11/16	.98
965H	7/16	7/16	5/16		1/4	7/8	1.16
966H	1/2	1/2	3/8			1	1.26
967H	9/16	9/16	7/16		5/16	1-1/8	1.42
968H	5/8	5/8	1/2		3/8	1-1/4	1.54

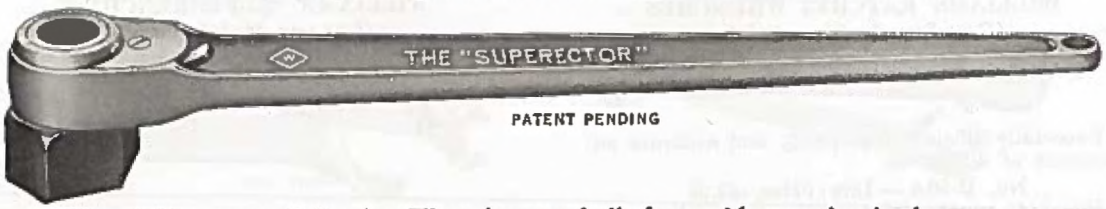
HEXAGON OPENINGS

No.	Nominal Openg.	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Diam. of Head	List Price, Each
961A	5/16	1/8	1/8			1/2	$.80
962D	3/8		3/16			5/8	.88
963A	13/32	3/16				11/16	.98
963D	7/16		1/4	1/4	1/4	11/16	.98
964A	1/2	1/4	5/16	5/16		3/4	1.04
965D	9/16		3/8	3/8	5/16	7/8	1.16
965A	19/32	5/16				7/8	1.16
966D	5/8		7/16	7/16	3/8	1	1.26

For Refrigeration Wheel Puller see page 73

WILLIAMS' +"SUPERECTOR" REVERSIBLE RATCHET WRENCHES

With Quadruple Pawls and Drop-Forged Handle



PATENT PENDING

Williams' "Superector" Ratchet Wrenches are built for rapid operation in the most severe service such as bridge, structural and other work requiring fast, dependable tools of rugged strength. They are instantly reversible in action. Three sizes of mechanism — E1, E2 and E3 — in five long, slim but powerful handles provide ample leverage for the hardest jobs.



HEX SOCKETS

SOCKETS have hole extending clear through their center so that nuts may be turned all the way down on any length of bolt. They are in three groups—E1, E2 and E3—to fit corresponding wrench handles, as shown in table below. Sockets in one group are not interchangeable with those in another group. All are heat-treated for maximum tough strength.

Whitworth Std. sizes start on page 124.



SQUARE SOCKETS

Only Williams' "SUPERECTOR" offers all the following advantages:—

QUADRUPLE PAWLS. Instead of the usual single pawl, bearing against one gear tooth, the "Superector" provides increased bearing and strength by 2 pawls engaging 2 teeth for both ON and OFF rotation of nuts. All 4 pawls are of hardened tool steel, so designed as to provide pure crushing action on the pawls—the sturdiest construction possible, with no "back-lash."

HANDLE, or Wrench proper, is drop-forged—not cast—in order to utilize the extra strength afforded by the pawls.

GEAR TEETH. The "Superector" is the only line of wrenches of this type with 20 teeth in all socket gears, instead of the usual 16 teeth. Consequently, all wrenches will rotate nuts with only an 18° swing of the wrench as against 22-1/2°.

SHIFTER-LEVER, when in neutral, completely disengages all pawls for easy insertion and removal of the Socket. A flip of the lever reverses the action of the wrench.

SOCKET RETAINING COLLAR has a projection on its inner surface which registers easily with a corresponding slot in the neck of the Socket. No fumbling for set screw "spots" when engaging the headless, slotted socket screws.

COVER PLATE, securely seated in the wrench head, is fastened by one screw, fully enclosing the mechanism and permitting easy removal.

FINISH. Wrenches and Sockets are finished in baked light gray enamel.

When ordering, always specify Wrenches and Sockets by number.

WRENCHES			SOCKETS ONLY—Hex and Square						
No.	Length, from center of Head	LIST Wrench Only, without Socket	Nominal Opening, Size Across Flats	Number Hex Socket	Number Square Socket	Amer. Std. HEAVY Nut (U.S.S.) Hex & Sqr.	Amer. Std. LIGHT Nut (S.A.E.) Hex Only	Amer. Std. REGLR. Nut Hex & Sqr.	LIST Hex or Square Socket Only
E1 SOCKETS below fit E1-24 and E1-36 Wrenches ONLY									
			1		E1-416			5/8	$4.85
E1-24	24	$12.60	1- 1/16	E1-617	E1-417	5/8	3/4		4.85
			1- 1/8	E1-618	E1-418			3/4	4.90
E1-36	36	19.80	1- 1/4	E1-620	E1-420	3/4	7/8		5.00
			1- 5/16	E1-621	E1-421			7/8	5.10
			1- 7/16	E1-623	E1-423	7/8	1		5.20
			1- 1/2	E1-624	E1-424			1	5.30
			1- 5/8	E1-626	E1-426	1	1-1/8		5.40
			1-11/16	E1-627				1-1/8	5.50
			1- 3/4	E1-628					5.60
Note: Sockets at right fit both above Wrenches.			1-13/16	E1-629	E1-429	1-1/8	1-1/4		5.65
			1- 7/8	E1-630	E1-430			1-1/4	5.75
			2	E1-632	E1-432	1-1/4	1-3/8		5.90
			2- 1/16	E1-633				1-3/8	6.00
			2- 3/16	E1-635	E1-435	1-3/8	1-1/2		6.20
			2- 1/4	E1-636	E1-436			1-1/2	6.40
E2 SOCKETS below fit E2-36 and E2-48 Wrenches ONLY									
			2	E2-632	E2-432	1-1/4	1-3/8		$ 9.70
E2-36	36	$25.20	2- 3/16	E2-635	E2-435	1-3/8	1-1/2		10.00
E2-48	48	32.40	2- 3/8	E2-638	E2-438	1-1/2			10.40
			2- 9/16	E2-641	E2-441	1-5/8			10.80
Note: Sockets at right fit both above Wrenches.			2- 3/4	E2-644	E2-444	1-3/4			11.30
			2-15/16	E2-647	E2-447	1-7/8			11.85
			3- 1/8	E2-650	E2-450	2			12.40
E3 SOCKETS below fit E3-48 Wrenches ONLY									
E3-48	53	$50.40	3- 1/8	E3-650	E3-450	2			$20.10
			3- 1/2	E3-656	E3-456	2-1/4			20.80
Note: Sockets at right fit the above Wrench.			3- 7/8	E3-662	E3-462	2-1/2			21.60
			4- 1/4	E3-668	E3-468	2-3/4			22.55
			4- 5/8	E3-674	E3-474	3			23.65

Weights, page K.

+ REGISTERED TRADE MARK

"SUPERECTOR" SET No. E1-12



List Price, Complete—$71.25

12 Pieces

In Wooden Box, 36 x 6 x 5-1/2"

"Superector" Wrench E1-24 and 11 Sockets:

7 Hex — 1-1/16, 1-1/4, 1-7/16, 1-5/8, 1-13/16, 2 and 2-3/16".

4 Square—1-1/16, 1-1/4, 1-7/16 and 1-5/8 inches.

10-42

WILLIAMS' ✦ "SUPERSOCKET" WRENCHES

Williams' "Supersocket" Wrenches are strong, dependable tools in which Williams' high standard of quality has been maintained throughout. Five separate and distinct patterns of Sockets, with a full assortment of Handles and Parts for each, cover practically all industrial needs:—

MIDGET Electrical—1/4" Square Drive. Slim, Straight Wall Sockets for all delicate adjustments. Openings, 3/16 to 7/16"—4, 6, 8 and 12-points.

BANTAM—3/8" Square Drive. Light, but strong Straight Wall Sockets with thin walls for use in close quarters. 12-point openings, 1/4 to 3/4".

STANDARD—1/2" Square Drive, includes Sockets with 12-point and Square openings up to 1-1/4" for general service.

HEAVY DUTY—3/4" Square Drive. Sockets have 12-point openings 7/8 to 2-1/4". Made for harder service than the ordinary run of work.

EXTRA HEAVY DUTY—1" Square Drive. Sockets have 12-point openings 1-1/16 to 2-3/4". Ruggedly designed for the toughest kind of service.

"SUPERSOCKET" NUMBERING SYSTEM

This system, developed by J. H. Williams & Co., has proven so simple in application that it has met general approval. Its description follows:—

The five Patterns of "Supersockets" are called—

"Midget"	"Bantam"	"Standard"	"Heavy Duty"	"Extra Heavy Duty"

The symbol for each pattern is:

NM	B	S	H	NX

The drive for each pattern is:

1/4" Square	3/8" Square	1/2" Square	3/4" Square	1" Square

SOCKET NUMBERS

1. Prefix letter in the piece number indicates the Pattern and hence the size of drive. Thus, No. S-1214 indicates Standard Pattern, 1/2" square drive.

2. The first figure, or the first two figures in the piece number indicate the number of "points" in the opening of the "Supersocket"—i.e., 4, 6, 8 or 12 points. The last two figures in the piece number indicate the nominal socket opening in 32nds of an inch. Thus, No. B-1214 indicates Bantam Pattern, 3/8" square drive, 12-point 14/32, or 7/16" opening.

3. Variations: Standard Pattern Sockets are Taper Nose, or Straight Wall in style. The prefix ST indicates Straight Wall. Similarly, SD as prefixed to the piece number means Extra Deep Standard sockets.

HANDLES and PARTS NUMBERS

1. Prefix letter in the piece number indicates pattern and hence size of drive, similarly to Sockets, above.

2. Figures indicate the particular Part. The same figures are used in *all* other Patterns of the same style Part. For instance:—

Sliding T Handle	Midget	Bantam	Standard	Heavy Duty	Extra Heavy Duty
	NM-20A	B-20A	S-20C	H-20A	NX-20B

3. The suffix letter denotes some variation in form. The "C" in No. S-20C, for instance, indicates the handle is offset, *not* straight, as are NM-20A, B-20A, etc.

✦ REGISTERED TRADE MARK

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' +"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

MIDGET PATTERN—1/4" SQUARE DRIVE

(Previously 9/32" Sq. Drive—Now Obsolete)

SOCKETS



With Hex, 12-Point and Square Openings

Williams' Midget Electrical Sockets are unequalled in cramped quarters and for delicate adjustments. Invaluable time-savers on Generators, Wiring-connections, Radios, etc.

Their thin, straight walls enable them to operate readily on troublesome little jobs where no ordinary socket or wrench could even get in and grip the nut. Furnished with hex and square openings as listed.

Accurately made from Chrome-Molybdenum steel and heat-treated in electric furnaces. Uniformity of product and tough, dependable strength are assured.

All Sockets packed 6 in a box.

Nominal Opening	SOCKETS FOR HEX NUTS AND CAP SCREWS								SQUARE		
	Hexagon Sockets		12-Point Sockets		Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. Machine Screw Hex Nut	Square Socket No.	List Price	Nominal Opening
	No.	List Price	No.	List Price							
3/16	NM-606	$.45						No. 2 & 3	NM-406	$.45	3/16
7/32	NM-607	.45							NM-407	.45	7/32
1/4	NM-608	.45						4	NM-408	.45	1/4
9/32	NM-609	.45									
5/16			NM-1210	$.45	1/8	1/8		5 & 6	†NM-810	.45	5/16
11/32			NM-1211	.45				8			
3/8			NM-1212	.45		3/16		10	†NM-812	.45	3/8
7/16			NM-1214	.45		1/4	1/4	12 & 1/4			

† 8-Point opening.



HANDLES and PARTS

No.	Piece	List Price, Each
NM-20A	Sliding T Handle—4-1/2" long	$1.02
NM-42	Flex Handle only—5-3/4" long; flexible head, knurled grip, crosshole for use with Sliding Bar	1.40
NM-42B	Sliding Bar, 1/4" x 4-1/2", for NM-42	.25
NM-51	Reversible Ratchet—4-1/2" long. 24 teeth in Ratchet-gear instead of usual 14 to 20. Turning shift-lever reverses action instantly	4.00
NM-102	Extension—2" long. Otherwise like NM-115	.85
NM-110	Extension-Driver has lockable-revolving, knurled handle with 1/4" square drive-opening in end. May be used either as an Extension with handy revolving grip for spinning nuts, or as a Driver with handle locked. A slight turn of the handle locks and unlocks same instantly. 5-3/8" long	1.44
NM-115	Extension—6" long	1.08
MM-130	Adapter—1/4" square male and 9/32" square female. Adapts Sockets with 1/4" square drive-openings to Handles with 9/32" square drive-plug	.90
MM-131	Adapter—9/32" square male and 1/4" square female. Adapts Sockets with 9/32" square drive-openings to Handles with 1/4" square drive-plug	.90
MM-150	Plug Adapter—1" long; 1/4" sq. and 9/32" sq. male	.60



For Refrigeration Set, see page 65; Hollow-Screw Set, page 69.

Weights, pages J and K.

+ REGISTERED TRADE MARK

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NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' MIDGET WRENCH SETS

Chrome-plated over Nickel

***1/4" Square Drive Sockets**

Any Williams' Midget Set is a handful of helpfulness on those fussy, troublesome little jobs that ordinary wrenches can't handle. These various combinations of Midget "Supersockets," "Superrenches" and "Superpliers" are ideal for all delicate adjustments on generators, wiring-connections, radios, etc. Unequalled in cramped quarters. Forged Chrome-Molybdenum steel, heat-treated, chrome-finished.

"SUPERSOCKET" ELECTRICAL SET No. 1269PR

NEW



LIST PRICE, Complete—
In Strong Steel Case, 5-1/2 x 3 x 1"

Set 1269PR—complete as illustrated $12.90
Set 1269P —without "Superratchet" 8.80
Set 1269 —without "Superplier" and "Superratchet" ... 6.95

Set 1269PR will be furnished, unless otherwise specified.

Contents of Set 1269PR

8 Midget "Supersockets"—4 with Hex openings 3/16, 7/32, 1/4 and 9/32"; 4 with 12-point openings 5/16, 11/32, 3/8 and 7/16". Reversible "Superratchet," 4-1/2" long; Sliding T Handle, 4-1/2" long. Extension-Driver, 5-3/8", with revolving, lockable grip. Midget "Superpliers," 4-1/2".

COMBINATION ELECTRICAL SET No. 1285P



Contents

8 Midget "Supersockets"—4 Hex openings, 3/16, 7/32, 1/4 and 9/32"; 4 twelve-point openings 5/16, 11/32, 3/8, 7/16". Sliding T Handle, 4-1/2" long; Extension-Driver with revolving, lockable grip, 5-3/8". 4 Midget "Superrenches" (3 to 3-1/2" long)—openings 13/64, 7/32, 15/64, 1/4, 9/32, 5/16, 11/32 and 3/8". Midget "Superplier", 4-1/2" long, see page 71.

LIST PRICE, Complete—
In Strong Steel Case, 5-1/2 x 3 x 1"

Set 1285P—complete as illustrated $11.55
Set 1285 —without "Superplier" 9.70

Set 1285P will be furnished, unless otherwise specified.

UNIVERSAL ELECTRICAL SET No. 1286PR

NEW



Contents

13 Midget "Supersockets"—4 Hex openings, 3/16, 7/32, 1/4 and 9/32"; 4 twelve-point openings 5/16, 11/32, 3/8, 7/16"; 3 square openings, 3/16, 7/32, and 1/4"; 2 eight-point openings, 5/16 and 3/8". Reversible "Superratchet", 4-1/2" long; Sliding T Handle, 4-1/2"; Extension-Driver with revolving, lockable grip, 5-3/8". 4 Midget "Superrenches" (3 to 3-1/2" long)—openings 13/64, 7/32, 15/64, 1/4, 9/32, 5/16, 11/32 and 3/8". Midget "Superplier", 4-1/2".

LIST PRICE, Complete—
In Strong Steel Case, 6-3/4 x 4-1/4 x 1"

Set 1286PR—complete as illustrated $18.50

COMBINATION ELECTRICAL SET No. 1291P



LIST PRICE, Complete—
In Strong Steel Case, 5-1/2 x 3 x 1"

Set 1291P—with "Superplier" No. 1519 $15.85
Set 1291 —without "Superplier" 14.00

Set 1291P will be furnished, unless otherwise specified.

Contents of Set 1291P

8 Midget "Supersockets"—4 Hex openings, 3/16, 7/32, 1/4 and 9/32"; 4 twelve-point openings, 5/16, 11/32, 3/8, 7/16".

Sliding T Handle, 4-1/2" long; Extension-Driver with revolving, lockable grip, 5-3/8" long.

10 Midget "Superrenches" (3 to 4-1/2" long)—openings 3/16, 13/64, 7/32, 15/64, 1/4, 9/32, 5/16, 11/32, 3/8 and 7/16".

Midget "Superplier", 4-1/2", page 71.

UNIVERSAL ELECTRICAL SET No. 1292PR

NEW



LIST PRICE, Complete—
In Strong Steel Case, 6-3/4 x 4-1/4 x 1"

Set 1292PR—complete as illustrated $23.80

Contents of Set 1292PR

13 Midget "Supersockets"—4 Hex openings, 3/16, 7/32, 1/4 and 9/32"; 4 twelve-point openings, 5/16, 11/32, 3/8, 7/16"; 3 square openings, 3/16, 7/32 and 1/4"; 2 eight-point openings, 5/16 and 3/8".

Reversible "Superratchet", 4-1/2" long. Sliding T Handle, 4-1/2" long; Extension-Driver with revolving, lockable grip, 5-3/8" long; Extension 6".

10 Midget "Superrenches" (3 to 4-1/2" long)—openings 3/16, 13/64, 7/32, 15/64, 1/4, 9/32, 5/16, 11/32, 3/8 and 7/16".

Midget "Superplier", 4-1/2", page 71.

***Previously 9/32" Square Drive—Now Obsolete**

NOTICE — National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

BANTAM PATTERN

3/8" Square Drive



Extra Deep 12-Point



12-Point Regular

SOCKETS

Williams' "Bantam" Sockets with thin walls get in and service "buried" nuts in close and awkward corners. Furnished in four styles; Regular, Extra Deep and Universal, all with 12-point (hex) openings; also, Extra Deep with 8-point (square) openings. All Universal Sockets have an operating range of approximately 130° and are fitted with spring tension to maintain the operating angle desired.

Made from a superior grade of high tensile steel—Chrome-Alloy—and heat-treated in electric furnaces for maximum toughness and strength. All Sockets packed 6 in a box.



Universal 12-Point

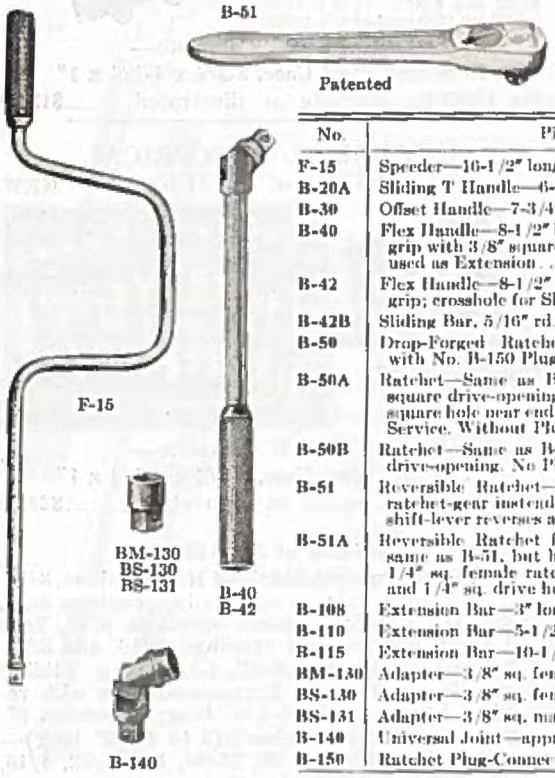


Extra Deep 8-Point

Size Opening	12-POINT OPENINGS FOR HEX NUTS, ETC. — Straight Wall Sockets — Regular No.	Regular List	‡Extra Deep No.	‡Extra Deep List	Universal No.	Universal List	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Amer. Std. Mach. Screw	8-POINT OPENINGS *Extra Deep SQUARE Sockets No.	*Extra Deep SQUARE Sockets List	Size Opening
* 1/4	†B- 608	$.72					1/8	1/8			No. 4			1/4
* 5/16	B-1210	.72									5 & 6			5/16
* 11/32	B-1211	.72									8			11/32
3/8	B-1212	.72						3/16			10			3/8
7/16	B-1214	.72	BD-1214	$.77	BU-1214	$2.30		1/4	1/4	1/4	12-1/4	BD-814	$.85	7/16
1/2	B-1216	.72	BD-1216	.77	BU-1216	2.30	1/4	5/16	5/16			BD-816	.85	1/2
9/16	B-1218	.72	BD-1218	.77	BU-1218	2.55		3/8	3/8	5/16	5/16	BD-818	.92	9/16
5/8	B-1220	.72	BD-1220	.77	BU-1220	2.65		7/16	7/16	3/8	3/8	BD-820	.92	5/8
11/16	B-1222	.84	BD-1222	.90			3/8							11/16
3/4	B-1224	.84	BD-1224	1.00				1/2	1/2	7/16				3/4

†Single Hex: taper nose. ‡2 to 2-1/2" long. *1-1/2" long.

HANDLES and PARTS









No.	Piece	List
F-15	Speeder—16-1/2" long; Knurled revolving grip	$2.10
B-20A	Sliding T Handle—6-1/2" long	1.35
B-30	Offset Handle—7-3/4" long; Knurled grip	1.50
B-40	Flex Handle—8-1/2" long; flexible head. Knurled grip with 3/8" square drive hole in end—may be used as Extension	2.70
B-42	Flex Handle—8-1/2" long; flexible head, knurled grip; crosshole for Sliding Bar	2.70
B-42B	Sliding Bar, 5/16" rd. x 6", for B-42	.40
B-50	Drop-Forged Ratchet—6-1/2" long; complete with No. B-150 Plug-Connector	3.60
B-50A	Ratchet—Same as B-50 above, but with 1/4" square drive-opening in ratchet wheel and 1/4" square hole near end of handle, for Refrigeration Service. Without Plug-Connector	3.60
B-50B	Ratchet—Same as B-50, but with 5/16" square drive-opening. No Plug-Connector	3.30
B-51	Reversible Ratchet—6-1/2" long. 24 teeth in ratchet-gear instead of usual 14 or 16. Turning shift-lever reverses action instantly	4.50
B-51A	Reversible Ratchet for Refrigeration Service—same as B-51, but has both 3/8" sq. male and 1/4" sq. female ratchet drive. Also, has 3/16" and 1/4" sq. drive holes in handle end	4.50
B-108	Extension Bar—3" long	1.08
B-110	Extension Bar—5-1/2" long	1.08
B-115	Extension Bar—10-1/2" long	1.20
BM-130	Adapter—3/8" sq. female and 9/32" sq. male	.90
BS-130	Adapter—3/8" sq. female and 1/2" sq. male	1.02
BS-131	Adapter—3/8" sq. male and 1/2" sq. female	1.02
B-140	Universal Joint—approx. operating range 140°	2.46
B-150	Ratchet Plug-Connector	.54

Refrigeration Set, page 65; Hollow-Screw Wrench Set, page 69.

✦ REGISTERED TRADE MARK

Weights, pages J and K.

*Discontinued—will supply until stock is exhausted.

10-42

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

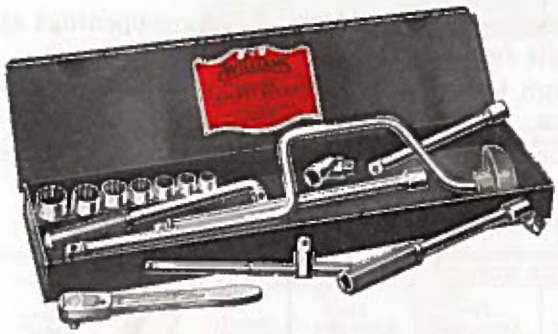
WILLIAMS' +"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

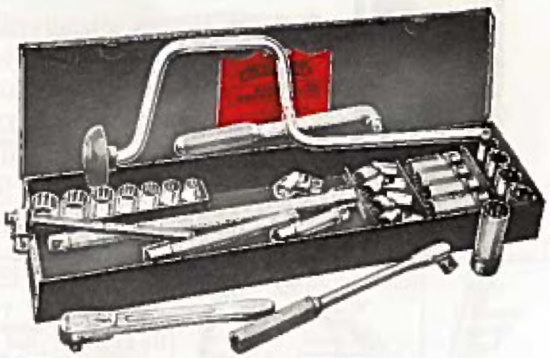
BANTAM PATTERN—3/8" SQUARE DRIVE

FOR AVIATION AND GENERAL SERVICE

SET No. 6-B



SET No. 7-A



SET No. 5
LIST PRICE — $24.40
15 Pieces —
7 Sockets and 8 Attachments
Same Assortment as Set No. 6, but with 7 instead of 10 Sockets and without B-108.
In Strong Steel Case, 17x4x1-1/4"
Total Weight, 6-1/2 lbs.

SET No. 6-B
LIST PRICE — $25.50
16 Pieces —
7 Sockets and 9 Attachments
In Strong Steel Case, 17x4x1-1/2"
Total Weight, 7-1/4 lbs.

SET No. 7-A
LIST PRICE — $43.95
30 Pieces —
21 Sockets and 9 Attachments
In Strong Steel Case,
17x4-1/2x1-7/8"
Total Weight, 9-1/2 lbs.

†NOTE:—Ratchet No. B-50 (page 50) may be substituted for B-51 in Sets Nos. 5, 6-B, and 7-A, at a reduction of $.90 in List Price of each Set.

SET No. 5

This Set supplies a convenient and economical assortment of 7 "Bantam" Regular Thin Wall "Supersockets" and 8 Accessories for the general run of small work. A minimum of tools provides maximum performance. See table for details.

SET No. 6-B

A practical assortment of tools, providing very efficient aviation service, etc.

Contains the same 7 Regular Thin Wall "Supersockets" and 9 Drivers as Set No. 7-A. Although the general assortment of sockets is not so complete as in the latter, Set No. 6-B provides a wide range of combinations for a great variety of service. See table for details.

SET No. 7-A

This Set is especially designed for aviation, and general use, the large assortment of sockets providing most comprehensive service.

It contains 21 "Bantam" Supersockets as follows: 7 Regular Thin Wall, 12-point openings 3/8 to 3/4"; 4 Universal, 12-point openings 7/16 to 5/8"; 10 Extra Deep, 6 with 12-point openings 7/16 to 3/4" and 4 with 8-point openings 7/16 to 5/8". Covers all popular Nuts and Cap Screws, U. S., S.A.E. and American Standards.

Also, 9 strong, slim Drivers, including Universal Joint; work easily in close quarters. See table for details.

CONTENTS OF SETS

Thin Wall Sockets

Nominal Opening	Socket No.	LIST PRICE In Set No. 5	In Set No. 6-B	In Set No. 7-A
REGULAR — 12-POINT				
3/8	B-1212	$.72	$.72	$.72
7/16	B-1214	.72	.72	.72
1/2	B-1216	.72	.72	.72
9/16	B-1218	.72	.72	.72
5/8	B-1220	.72	.72	.72
11/16	B-1222	.84	.84	.84
3/4	B-1224	.84	.84	.84
EXTRA DEEP — 12-POINT — 2 to 2-1/2" Long				
7/16	BD-1214			.77
1/2	BD-1216			.77
9/16	BD-1218			.77
5/8	BD-1220			.77
11/16	BD-1222			.90
3/4	BD-1224			1.00
EXTRA DEEP — 8-POINT — 1-1/2" Long				
7/16	BD-814			.85
1/2	BD-816			.85
9/16	BD-818			.92
5/8	BD-820			.92
UNIVERSAL — 12-POINT				
7/16	BU-1214			2.30
1/2	BU-1216			2.30
9/16	BU-1218			2.55
5/8	BU-1220			2.55

Handles and Parts

No.	In Sets Nos. *5, 6-B and 7-A	List Price
F-15	Speeder—16-1/2" long; knurled, revolving grip	$2.10
B-20A	Sliding T Handle—6-1/2" long	1.35
B-30	Offset Handle—7-3/4" long; knurled grip	1.50
B-40	Flex Handle—8-1/2" long; flexible head	2.70
†B-51	Reversible "Superratchet"—6-1/2" long	4.50
*B-108	Extension Bar—3" long	1.08
B-110	Extension Bar—5-1/2" long	1.08
B-115	Extension Bar—10-1/2" long	1.20
B-140	Universal Joint—approx. operating range 140°	2.46

†See "Note" above. *No. B-108 omitted from Set 5.

+ REGISTERED TRADE MARK

WILLIAMS'+"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

STANDARD PATTERN — ½" Square Drive



REGULAR SOCKETS

Williams' Standard Sockets, with 12-point and Square openings as listed below, have thin walls for work in close places.

Made from superior high tensile steel—Chrome-Alloy—and heat-treated in electric furnaces. All sockets packed 6 in a box.

To drive "Standard" Sockets with "Bantam" Handles, use Adapter BS-130, pages 50 and 64.

Whitworth Standard and Metric sizes also; details on request.

Nominal Opening	12-POINT OPENINGS FOR HEX NUTS: Straight Wall 12-point Sockets No.	List	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screws; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	SQUARE OPENINGS: Square Sockets No.	List	Nominal Opening
7/16	ST-1214	$.72		1/4	1/4	1/4	S-410	$.72	5/16
1/2	ST-1216	.72	1/4	5/16	5/16		S-412	.72	3/8
9/16	ST-1218	.72		3/8	3/8	5/16	S-414	.72	7/16
19/32	ST-1219	.72	5/16				S-416	.72	1/2
5/8	ST-1220	.72		7/16	7/16	3/8	S-418	.72	9/16
*21/32	ST-1221	.72							
11/16	ST-1222	.84	3/8				S-420	.72	5/8
3/4	ST-1224	.90		1/2	1/2	7/16			
25/32	ST-1225	.90	7/16				S-422	.84	11/16
13/16	ST-1226	.90		9/16		1/2	S-424	.90	3/4
7/8	ST-1228	.90	1/2	5/8	9/16	9/16			
15/16	ST-1230	1.08			5/8				
31/32	ST-1231	1.08	9/16				S-428	.90	7/8
1	ST-1232	1.08		3/4		5/8			
1-1/16	S-1234	1.20	5/8		3/4				
1-1/8	S-1236	1.32		7/8		3/4	S-432	1.20	1
1-3/16	S-1238	1.38							
1-1/4	S-1240	1.44	3/4		7/8				

*Discontinued—will supply until stock is exhausted.

STANDARD EXTRA DEEP 12-POINT SOCKETS

For "Buried" Nuts



Cross Hole For Bar

Especially designed for use where the nuts lie some distance from the outer end of the threaded stem. Long and slim with thin walls for use in cramped places. Their 12-point openings permit operation in close quarters where the handle can be swung only 30°.

Carefully made from high tensile steel—Chrome-Molybdenum—and heat-treated. Packed 3 in a box.

Whitworth Standard and Metric sizes also; details on request.

Twelve Point Opening	EXTRA DEEP Sockets No.	Length	List	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt
1/2	SD-1216	3-1/4	$1.14	1/4	5/16	5/16	
9/16	SD-1218	3-1/4	1.14		3/8	3/8	5/16
5/8	SD-1220	3-1/4	1.26		7/16	7/16	3/8
11/16	SD-1222	3-1/4	1.26	3/8			
3/4	SD-1224	3-1/4	1.26		1/2	1/2	7/16
13/16	SD-1226	3-1/4	1.26		9/16		1/2
7/8	SD-1228	3-1/4	1.26	1/2	5/8	9/16	9/16
15/16	SD-1230	3-1/4	1.38			5/8	
1	SD-1232	3-1/4	1.50		3/4		5/8
1-1/8	SD-1236	3-1/4	1.68		7/8		3/4

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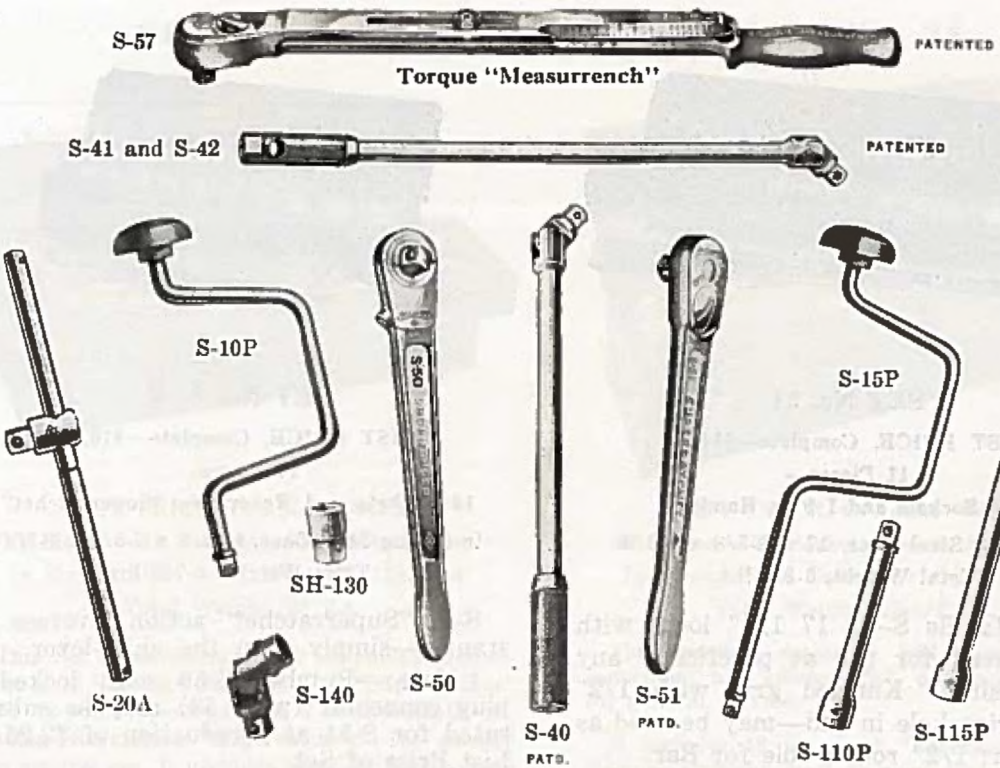
Weights, page K.

+ REGISTERED TRADE MARK

WILLIAMS' "SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

STANDARD HANDLES and PARTS—1/2" Square Drive



No.	PIECE	LIST PRICE	No.
S-10P	Speeder—12" long, with plastic revolving grip	$ 2.70	S-10P
S-15P	Speeder—17-1/2" long, with plastic revolving grip	2.70	S-15P
S-20A	Sliding T Handle—11" long	2.10	S-20A
S-40	Flex Handle—12" long; flexible head. Knurled grip with 1/2" square drive hole in end—may be used as Extension	3.90	S-40
S-41	Flex Handle—17-1/4"—flexible head. Knurled grip—1/2" square drive hole in end for use as Extension; 1/2" round cross hole for Bar	4.50	S-41
S-42	Flex Handle only—14-1/2". Flexible head, knurled grip, cross hole for Bar	3.90	S-42
S-42B	Sliding Bar, 7/16" x 9", for Flex Handle S-42	.60	S-42B
S-50	Ratchet—10" long, complete with Locked-in Plug Connector	4.50	S-50
S-51	Reversible Ratchet—10-1/2" long. 24 teeth in Ratchet-gear instead of usual 16. Turning shift-lever reverses action instantly	6.75	S-51
S-57	Torque "Measurrench"—19-1/2" long; indicates R.H. Torque. Has torque-indicating signal. Action reverses instantly for general use. See page 70	26.00	S-57
S-110P	Extension Bar—5-1/2" long	1.20	S-110P
S-115P	Extension Bar—10-1/2" long	1.65	S-115P
SH-130	Adapter—1/2" square female and 3/4" square male	1.20	SH-130
S-140	Universal Joint—operating range of approximately 140°	2.70	S-140


SB-30

SCREW DRIVER SOCKET ATTACHMENTS — 1/2" Square Drive

For use with Standard Pattern Handles and Parts.

No.	Size Blade	List Price
SB-30	7/64 x 15/16	$1.02
SB-40	3/32 x 1-1/4	1.38


SB-40

Weights, page J.

✦ REGISTERED TRADE MARK

WILLIAMS' ✦"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

STANDARD PATTERN—1/2" SQUARE DRIVE

SETS Nos. 21 and 21-R with Straight Wall Sockets





SET No. 21

LIST PRICE, Complete—$14.70

11 Pieces—

10 Sockets and 1 Flex Handle

In Strong Steel Case, 17 x 2-5/8 x 1-3/4"

Total Weight, 6-3/4 lbs.

Flex Handle S-41, 17 1/4" long, with flexible head for use at practically any angle desired. Knurled grip with 1/2" square drive hole in end—may be used as Extension; 1/2" round hole for Bar.

SET No. 21-R

LIST PRICE, Complete—$16.45

11 Pieces—

10 Sockets and Reversible "Superratchet"

In Strong Steel Case, 11-1/2 x 2-5/8 x 1-3/4"

Total Weight, 4-7/8 lbs.

S-51 "Superratchet" action reverses instantly—simply turn the shift-lever.

† Note:—Ratchet S-50 with locked-in plug connector (page 53) may be substituted for S-51 at a reduction of $2.25 in List Price of Set.

These handy and compact Sets supply at minimum price, assortments that cover a wide variety of work. Convenient, efficient and economical, providing an excellent opportunity to the mechanic to start his Socket Set. Additions to build up a complete assortment can be made at any time. Packed in cartons containing 6 Sets.

CONTENTS OF SET

10 Twelve-Point Sockets

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Hd. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGLR. Nut; Size Bolt	List Price, Each
ST-1214	7/16		1/4	1/4	1/4	$.72
ST-1216	1/2	1/4	5/16	5/16		.72
ST-1218	9/16		3/8	3/8	5/16	.72
ST-1219	19/32	5/16				.72
ST-1220	5/8		7/16	7/16	3/8	.72
ST-1222	11/16	3/8				.84
ST-1224	3/4		1/2	1/2	7/16	.90
ST-1225	25/32	7/16				.90
ST-1228	7/8	1/2	5/8	9/16	9/16	.90
ST-1232	1		3/4	11/16	5/8	1.08
S-41	FLEX HANDLE—17-1/4" LONG.....					4.50

✦ REGISTERED TRADE MARK

CONTENTS OF SET

10 Twelve-Point Sockets

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Hd. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGLR. Nut; Size Bolt	List Price, Each
ST-1214	7/16		1/4	1/4	1/4	$.72
ST-1216	1/2	1/4	5/16	5/16		.72
ST-1218	9/16		3/8	3/8	5/16	.72
ST-1219	19/32	5/16				.72
ST-1220	5/8		7/16	7/16	3/8	.72
ST-1222	11/16	3/8				.84
ST-1224	3/4		1/2	1/2	7/16	.90
ST-1225	25/32	7/16				.90
ST-1228	7/8	1/2	5/8	9/16	9/16	.90
ST-1232	1		3/4	11/16	5/8	1.08
†S-51	REVERSIBLE "SUPERRATCHET"—10-1/2" LONG.....					6.75

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NOTICE— National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

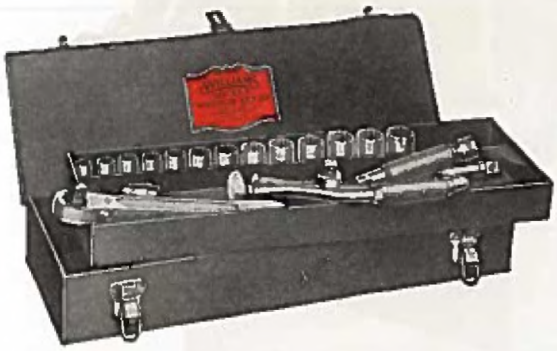
WILLIAMS' ✦"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

STANDARD PATTERN—1/2" SQUARE DRIVE

For MECHANICS and GENERAL SERVICE

SET No. 20



LIST PRICE, Complete—$42.20

21 Pieces — 13 Sockets and 8 Attachments

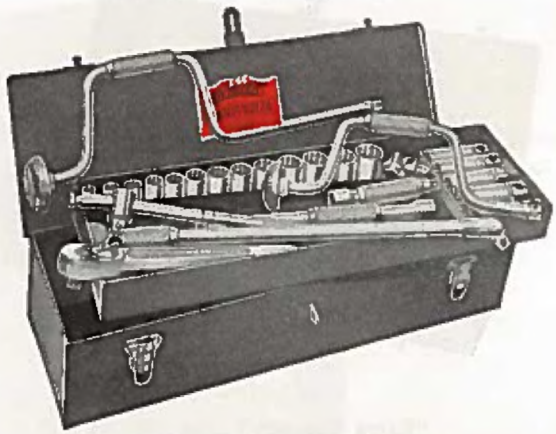
In Strong Steel Case, 20-1/4x6-1/2x3-3/4"

Total Weight, 23 lbs.

This Set is an efficient and economical assortment of 13 Standard Straight Wall "Supersockets" with 12-point openings and 8 Attachments, including Reversible "Superratchet," for garage and general use. It provides excellent service with a minimum number of tools. See table for details.

Set No. 20 (old D20) is a splendid assortment to build on, since other sizes of sockets can be added, when desired, at slight expense.

SET No. 26



LIST PRICE, Complete—$49.60

26 Pieces — 18 Sockets and 8 Attachments

In Strong Steel Case, 20-1/4x6-5/8x4-1/4"

Total Weight, 25-1/2 lbs.

The practical mechanic will appreciate this convenient and efficient Set, designed especially for general service.

It includes 18 Standard "Supersockets"; — 13 Regular Straight Wall, 12-point openings 7/16 to 1"; 5 Extra Deep, 12-point openings 11/16 to 1-1/8". These, with 8 Drivers, including Reversible "Superratchet" and Universal Joint, supply the comprehensive selection required in the general run of work. See table for details.

CONTENTS OF SETS

Thin Wall Sockets

Nominal Opening	Straight Wall Socket No.	LIST PRICE In Set No. 20	LIST PRICE In Set No. 26
REGULAR—12-POINT			
7/16	ST-1214	$.72	$.72
1/2	ST-1216	.72	.72
9/16	ST-1218	.72	.72
19/32	ST-1219	.72	.72
5/8	ST-1220	.72	.72
11/16	ST-1222	.84	.84
3/4	ST-1224	.90	.90
25/32	ST-1225	.90	.90
13/16	ST-1226	.90	.90
7/8	ST-1228	.90	.90
15/16	ST-1230	1.08	1.08
31/32	ST-1231	1.08	1.08
1	ST-1232	1.08	1.08
EXTRA DEEP—12-POINT			
11/16	SD-1222		1.26
13/16	SD-1226		1.26
7/8	SD-1228T		1.26
15/16	SD-1230		1.38
1-1/8	SD-1236		1.68

Handles and Parts

No	In Sets Nos. 20 and 26	List Price
S-10P	Speeder—12"—with Revolving Plastic Grip.....	$2.70
S-15P	Speeder—17-1/2"—with Revolving Plastic Grip..	2.70
S-20A	Sliding T Handle—11" long	2.10
S-41	Flex Handle—17-1/4" long.....	4.50
*S-51	Reversible "Superratchet"—10-1/2" long.....	6.75
S-110P	Extension—5-1/2"	1.20
S-115P	Extension—10-1/2".....	1.65
S-140	Universal Joint—approx. operating range 140°...	2.70

*NOTE:—Ratchet No. S-50, with reversible locked-in plug connector (page 53) may be substituted for S-51 at a reduction of $2.25 in List Price of each Set.

✦ REGISTERED TRADE MARK

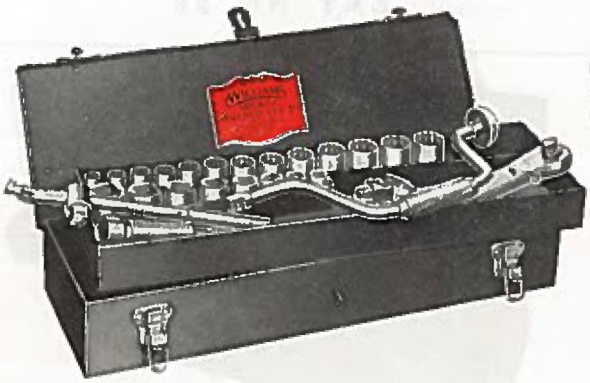
WILLIAMS' +"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

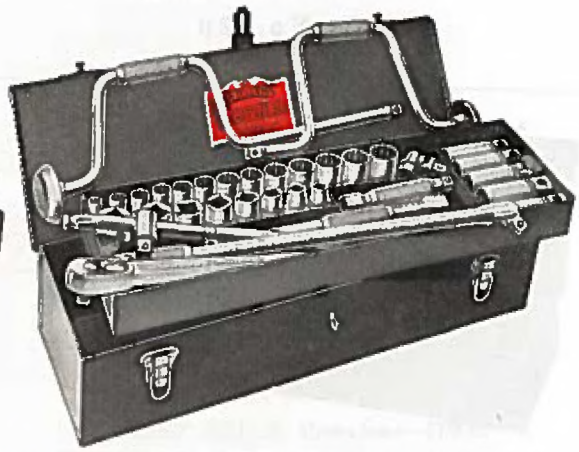
STANDARD PATTERN—1/2" SQUARE DRIVE

EXTRA CAPACITY

SET No. 30



SET No. 36



"Extra Capacity" Sets Nos. 30 and 36 are all the name implies. They carry a wide assortment of "Supersockets" and attachments, providing comprehensive service for general, all-around work.

LIST PRICE, Complete—$48.85

29 Pieces — 21 Sockets and 8 Attachments

In Strong Steel Case, 20-1/4x6-1/2x3-3/4"

Total Weight, 25-1/2 lbs.

SET No. 30 (old D30) contains 21 Standard "Supersockets":—13 Straight Wall, 12-point openings 7/16 to 1" for all popular sizes of U.S., S.A.E., and Amer. Std. Nuts and Cap Screws; 8 Regular, square openings 3/8 to 7/8". Also, 8 Handles and Parts, including Reversible "Superratchet" and Universal Joint.

LIST PRICE, Complete—$55.85

34 Pieces — 26 Sockets and 8 Attachments

In Strong Steel Case, 20-1/4x6-5/8x4-1/4"

Total Weight, 27-3/4 lbs.

SET No. 36 contains 26 Standard "Supersockets":—13 Straight Wall, 12-point openings 7/16 to 1" for all popular sizes of U.S., S.A.E., and Amer. Std. Nuts and Cap Screws; 5 Extra Deep, 12-Point openings 11/16 to 1-1/8" for popular spark plugs; 8 Regular, square openings 3/8 to 7/8". Also, 8 Handles and Parts, including Reversible "Superratchet" and Universal Joint.

CONTENTS OF SETS

Thin Wall Sockets

Nominal Openg.	Socket No.	LIST PRICE In Set No. 30	In Set No. 36		
STRAIGHT WALL—12-POINT—EXTRA DEEP					
7/16	ST-1214	$.72	ST-1214	$.72	
1/2	ST-1216	.72	ST-1216	.72	
9/16	ST-1218	.72	ST-1218	.72	
19/32	ST-1219	.72	ST-1219	.72	
5/8	ST-1220	.72	ST-1220	.72	
11/16	ST-1222	.84	ST-1222	.84	SD-1222 $1.26
3/4	ST-1224	.90	ST-1224	.90	
25/32	ST-1225	.90	ST-1225	.90	
13/16	ST-1226	.90	ST-1226	.90	SD-1226 1.26
7/8	ST-1228	.90	ST-1228	.90	SD-1228T 1.26
15/16	ST-1230	1.08	ST-1230	1.08	SD-1230 1.38
31/32	ST-1231	1.08	ST-1231	1.08	
1	ST-1232	1.08	ST-1232	1.08	
1-1/8					SD-1236 1.68
REGULAR—SQUARE OPENING					
3/8	S-412	.72	S-412	.72	
7/16	S-414	.72	S-414	.72	
1/2	S-416	.72	S-416	.72	
9/16	S-418	.72	S-418	.72	
5/8	S-420	.72	S-420	.72	
11/16	S-422	.84	S-422	.84	
3/4	S-424	.90	S-424	.90	
7/8	S-428	.90	S-428	.90	

Handles and Parts

No.	In Sets Nos. 30 and 36	List Price
S-10P	Speeder—12"—with Revolving Plastic Grip	$2.70
S-15P	Speeder—17-1/2"—with Revolving Plastic Grip	2.70
S-20A	Sliding T Handle—11" long	2.10
S-41	Flex Handle—17-1/4" long	4.50
*S-51	Reversible "Superratchet"—10-1/2" long	6.75
S-110P	Extension—5-1/2"	1.20
S-115P	Extension—10-1/2"	1.65
S-140	Universal Joint—approx. operating range 140°	2.70

*NOTE:—Ratchet No. S-50, with reversible locked-in plug connector (page 53), may be substituted for S-51 at a reduction of $2.25 in List Price each Set.

+ REGISTERED TRADE MARK

3-43

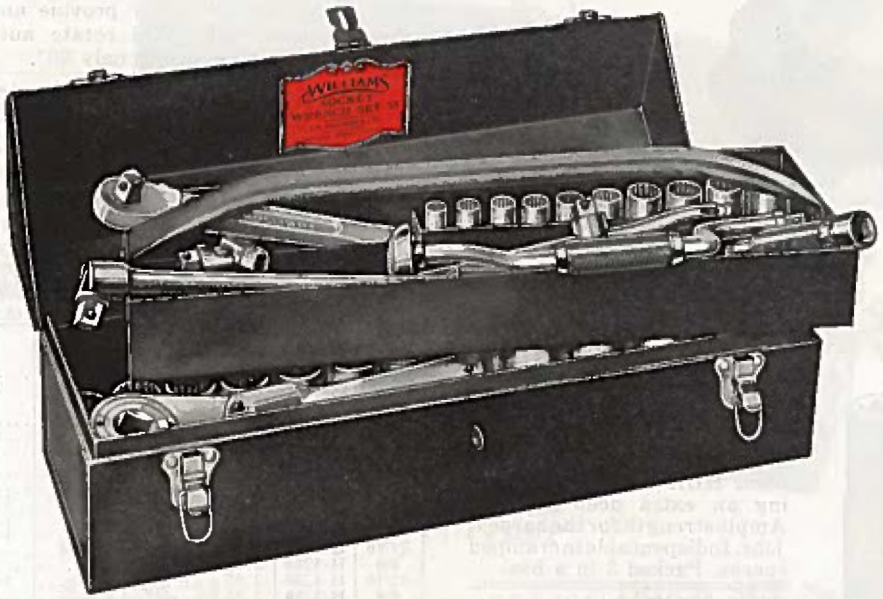
WILLIAMS' ✦"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

MASTER MECHANICS' SET No. 55

STANDARD PATTERN
1/2" SQUARE DRIVE

HEAVY DUTY PATTERN
3/4" SQUARE DRIVE



SET No. 55—LIST PRICE, Complete as shown—$87.85

In Strong Steel Case, 20-1/2 x 6-3/4 x 6-3/4"
Total Weight, 43-1/2 lbs.

SET No. 55-A—LIST PRICE—$83.35

Same as Set 55 but without Flex Handle S-41

Set No. 55 will be furnished, unless otherwise specified

This combination of "Standard" and "Heavy Duty" Socket Wrenches is especially adapted to industrial work and it is the ideal Millwrights' Set. Extremely useful for the set-up and maintenance of all machinery. Twenty-one 12-point Sockets for all U. S. Std. nuts, 1/4 to 1", cap screws 1/4 to 1-1/8", S.A.E. Std. nuts and cap screws 1/4 to 1-1/8", and Amer. Std. regular and jam nuts 1/4 to 1"; with two complete lines of 13 Handles and Parts—Standard pattern for Sockets up to 1" hex and Heavy Duty pattern for the larger sizes. The great variety of handle styles provides all desirable Socket Wrench combinations.

If wanted, Square Sockets may be obtained at slight expense.

12-point Sockets — CONTENTS OF SET — Handles and Parts

Standard Pattern			Heavy Duty Pattern		
Nominal Opening	No.	List Price	Nominal Opening	No.	List Price
7/16	ST-1214	$.72	1-1/16	H-1234	$1.32
1/2	ST-1216	.72	1-1/8	H-1236	1.38
9/16	ST-1218	.72			
19/32	ST-1219	.72			
5/8	ST-1220	.72	1-1/4	H-1240	1.56
11/16	ST-1222	.84	1-5/16	H-1242	1.56
3/4	ST-1224	.90			
25/32	ST-1225	.90	1-3/8	H-1244	1.56
13/16	ST-1226	.90	1-7/16	H-1246	1.86
7/8	ST-1228	.90			
15/16	ST-1230	1.08			
31/32	ST-1231	1.08	1-1/2	H-1248	1.86
1	ST-1232	1.08	1-5/8	H-1252	2.16

No.	Piece	List Price
	STANDARD PATTERN	
S-10P	Speeder—12"—with Revolving Plastic Grip	$2.70
S-15P	Speeder—17-1/2"—with Rev. Plastic Grip.	2.70
S-20A	Sliding T Handle—11" Long	2.10
*S-41	Flex Handle—17-1/4" Long	4.50
†S-51	Reversible "Superratchet"—10-1/2" Long.	6.75
S-110P	Extension—5-1/2"	1.20
S-115P	Extension—10-1/2"	1.65
S-140	Universal Joint; approx. operating range 140°	2.70
	HEAVY DUTY PATTERN	
H-20A	Sliding T Handle—17-1/2" Long	3.30
H-50	Ratchet—18-1/2", with Plug-Connector	10.50
H-110	Extension—8" Long	2.70
H-115	Extension—15-1/2" Long	3.30
H-140	Universal Joint; approx. operating range 140°	7.50

*NOTE:—Flex Handle S-41 omitted from Set 55-A.

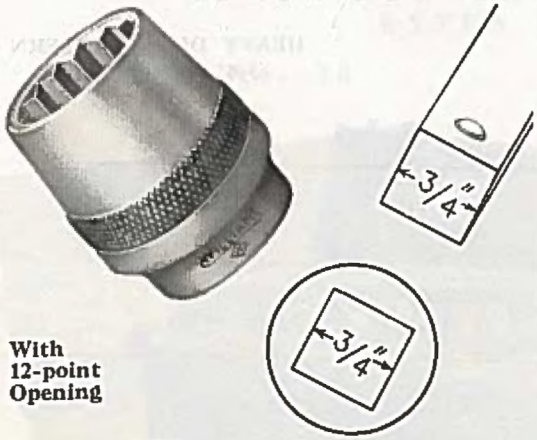
† S-50 Ratchet (page 53) may be substituted for S-51 at a reduction of $2.25 List Price for Set.

✦ REGISTERED TRADE MARK

WILLIAMS' +"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

HEAVY DUTY PATTERN—3/4" SQUARE DRIVE



With 12-point Opening

SOCKETS

Williams' Heavy Duty Sockets are designed for harder service where more strength is required than on the every-day job. They provide ample strength without clumsy bulk. Will rotate nuts completely where handle can be swung only 30°.

Made from superior high tensile steel and heat-treated in electric furnaces. Sockets packed 2 in a box.

To use "Heavy Duty" Sockets (3/4" square female drive) with "Standard" Handles (1/2" square male drive), use Adapter SH-130, page 53.

Whitworth Std. sizes also; details on request.

Size Opening	No.	List Price, Each	Amer.Std. HEAVY Nut (U.S.S.)	Amer.Std Hex Hd. Cap Screw	Amer.Std. LIGHT Nut (S.A.E.)	Amer.Std. REGULAR Nut
* 7/8	H-1228	$1.08	1/2	5/8	9/16	9/16
15/16	H-1230	1.08			5/8	
* 31/32	H-1231	1.08	9/16			
1	H-1232	1.08		3/4	11/16	5/8
1- 1/16	H-1234	1.32	5/8		3/4	
1- 1/8	H-1236	1.38		7/8		3/4
1- 3/16	H-1238	1.38				
1- 1/4	H-1240	1.56	3/4		7/8	
1- 5/16	H-1242	1.56		1		7/8
1- 3/8	H-1244	1.56				
1- 7/16	H-1246	1.86	7/8		1	
1- 1/2	H-1248	1.86		1-1/8		1
1- 5/8	H-1252	2.16	1		1-1/8	
1-11/16	H-1254	2.70		1-1/4		1-1/8
1- 3/4	H-1256	2.70				
1-13/16	H-1258	2.95	1-1/8		1-1/4	
1- 7/8	H-1260	2.95				1-1/4
2	H-1264	3.50	1-1/4		1-3/8	
* 2- 1/16	H-1266	4.10				1-3/8
* 2- 1/8	H-1268	4.40				
* 2- 3/16	H-1270	4.70	1-3/8		1-1/2	
* 2- 1/4	H-1272	5.30				1-1/2



EXTRA DEEP HEAVY DUTY SOCKETS

Specially designed for U-bolt nuts on Buses and Trucks and other HEAVY service requiring an extra deep opening. Ample strength for the hardest jobs. Indispensable in cramped spaces. Packed 3 in a box.

Openg.	No.	Lgth.	List
15/16	HD-1230	3-1/4	$1.62
1-1/16	HD-1234	3-1/4	1.86
1-1/4	HD-1240	3-1/4	2.28
1-7/16	HD-1246	3-1/2	2.52

For Extra Deep Standard Sockets (1/2" square drive) see page 52.

HANDLES and PARTS



No.	Piece	List
H-20A	Sliding T Handle—17-1/2" long	$3.30
H-41	Flex Handle—20" long; flexible head, knurled grip and cross hole for Sliding Bar	6.15
H-41B	Sliding Bar, 3/4" x 16" for H-41	1.10
H-50	Ratchet—18-1/2" long; Complete with Plug-Connector H-150	10.50
H-110	Extension Bar—8" long	2.70
H-115	Extension Bar—15-1/2" long	3.30
HNX-130	Adapter, 3/4" square female and 1" square male—Adapts Heavy Duty Handles (3/4" square male drive) to Extra Heavy Duty Sockets (1" square female drive). See page 60.	1.50
HX-130	Adapter, 3/4" square female and 1" hex male—Adapts Heavy Duty Handles (3/4" square male drive) to old style Extra Heavy Duty Sockets (1" hex female drive)	1.50
H-140	Universal Joint—approx. operating range 140°	7.50
H-150	Ratchet Plug-Connector	1.20
HH-150	Plug-Adapter, 5/8" square male and 3/4" square male	1.50

Weights, pages J and K.

3-43

+ REGISTERED TRADE MARK

*Discontinued—will supply until stock is exhausted.

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

HEAVY DUTY PATTERN — 3/4" Square Drive

SETS NOS 50 AND 51



In Strong Steel Case
19-3/4 x 5-1/4 x 2-3/4"

SET No. 50

LIST PRICE, Complete — $48.54

15 Pieces—10 Sockets and 5 Attachments
Total Weight, 28-3/4 lbs.

TRUCK SET No. 51

LIST PRICE, Complete — $30.54

13 Pieces—10 Sockets and 3 Attachments
Total Weight, 22-1/4 lbs.

For severe service requiring tools of trim design, yet of ample strength, these Heavy Duty Sets are unusually handy, efficient and economical.

Ten Sockets with 12-point openings from 1-1/16 to 1-3/4", care for all U. S. Std. Nuts 5/8 to 1"; Hex Cap Screw 7/8 to 1-1/8"; all S. A. E. Std. Nuts 3/4 to 1-1/8; all Amer. Std. Regular and Jam Nuts 3/4 to 1"; Light and Castle Nuts 3/4 to 1-1/8".

The Handles and Parts are easily connected with the Sockets (and as readily disconnected), but are held firmly against unintentional displacement.

† Set No. 51 is same in all respects as Set No. 50, excepting that it does not include Ratchet H-50 and Universal Joint H-140—see table below.

CONTENTS OF SETS

10 Twelve-point Sockets in Sets 50 and 51							5 Handles and Parts in Set 50		
Size Opening	No.	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	List Price, Each	No.	PIECES	List Price, Each
1-1/16	H-1234	5/8		3/4		$1.32	H-20A	Sliding T Handle—17-1/2" long.....	$3.30
1-1/8	H-1236		7/8		3/4	1.38			
1-3/16	H-1238					1.38	†H-50	Ratchet—18-1/2"—Complete with Plug-Connector.....	10.50
1-1/4	H-1240	3/4		7/8		1.56			
1-5/16	H-1242		1		7/8	1.56	H-110	Extension—8" long.....	2.70
1-3/8	H-1244					1.56			
1-7/16	H-1246	7/8		1		1.86	H-115	Extension—15-1/2" long.....	3.30
1-1/2	H-1248		1-1/8		1	1.86			
1-5/8	H-1252	1		1-1/8		2.16	†H-140	Universal Joint—approximate operating range 140°.....	7.50
1-3/4	H-1256					2.70			

† Nos. H-50 and H-140 omitted from Set 51.

✦ REGISTERED TRADE MARK

WILLIAMS' +"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

EXTRA HEAVY DUTY PATTERN

1" SQUARE DRIVE

SOCKETS



With 12-Point Opening

Williams' Extra Heavy Duty Sockets provide sturdy, rugged strength for the hardest kind of service. In addition to the 1" square drive opening in their base, they are cross-drilled to receive the Sliding Handle which is thus brought close to the work. This minimizes the tendency to tip when the socket is used near the end of the handle. Will rotate nuts completely where the handle can be swung only 30°.

Another feature is the "Lock-Socket" device which provides a positive lock between the sockets and attachments. To release the "Lock-Socket" simply press the button on the socket and pull. This device eliminates all danger of sockets becoming detached in service.

Made from a superior grade of high tensile steel and heat-treated in electric furnaces for maximum strength.

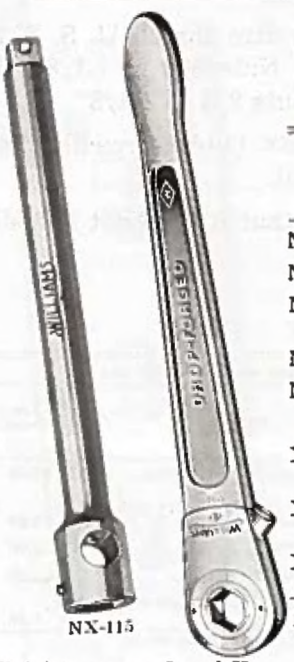
Sockets Nos. NX-1234 to NX-1248 packed 2 in a box. All others, 1 in a box.

Nominal Opening	No.	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGUL'R Nut; Size Bolt	List Price, Each	Nominal Opening	No.	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	List Price, Each
1-1/16	NX-1234	5/8		3/4		$1.80	1-13/16	NX-1258	1-1/8	1-1/4	$ 4.20
1-1/8	NX-1236		7/8		3/4	1.80	2	NX-1264	1-1/4	1-3/8	4.80
1-1/4	NX-1240	3/4		7/8		1.98	2-3/16	NX-1270	1-3/8	1-1/2	6.30
1-3/8	NX-1244					2.10	2-3/8	NX-1276	1-1/2		7.50
1-7/16	NX-1246	7/8		1		2.22					
1-1/2	NX-1248		1-1/8		1	2.70	2-1/2	NX-1280			10.50
							2-9/16	*NX-682	1-5/8		12.00
1-5/8	NX-1252	1		1-1/8		3.00	2-3/4	*NX-688	1-3/4		16.50

* These 2 Sockets have 6-point opening, short neck, no cross-hole.

Note:—To use "Extra Heavy Duty" Sockets (1" square female drive) with "Heavy Duty" Handles (3/4" square male drive), use Adapter HNX-130; pages 58 and 64.

HANDLES and PARTS



NX-115 NX-50

No.	Piece	List Price, Each
NX-20B	Sliding Handle—1" diam., 20" long	$ 2.10
NX-20C	Adapter—for Sliding Handle NX-20B	3.00
NX-50	Ratchet—20-1/2" long—Complete with Plug-Connector XX-150	16.20
NX-110	Extension Bar—9" long	5.25
NX-115	Extension Bar—18" long	6.40
X-150	Ratchet Plug-Connector—1" hex	1.68
XX-130	Adapter—1" square Female and 1" hex Male	3.30
XX-131	Adapter—1" hex Female and 1" square Male	3.30
XX-150	Adapter—1" square Male and 1" hex Male	2.70



XX-130 XX-131 NX-20C NX-110 XX-150 X-150 NX-20B

Weights, pages J and K.

+ REGISTERED TRADE MARK

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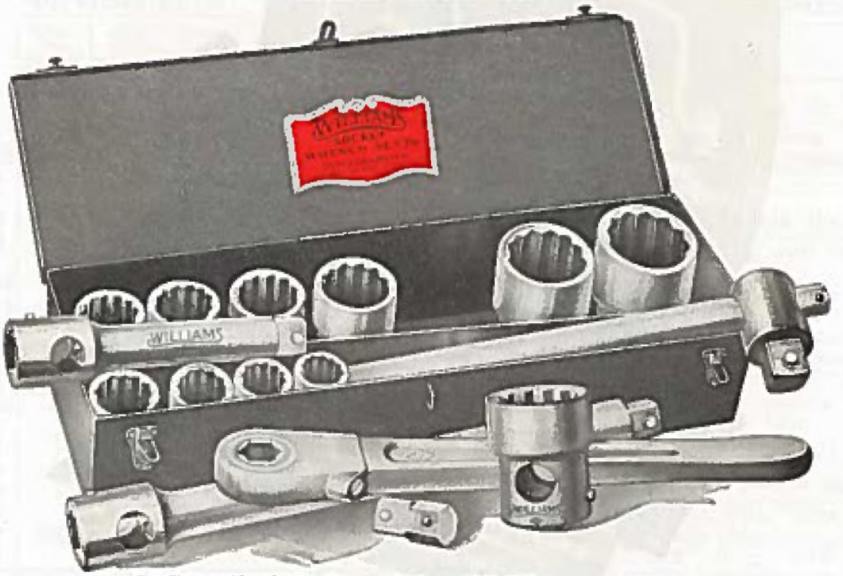
WILLIAMS' +"SUPERSOCKET" WRENCH SETS

Chrome-plated over Nickel

EXTRA HEAVY DUTY PATTERN

1" Square Drive

SET No. 76



LIST PRICE, Complete—16 Pieces—$77.00

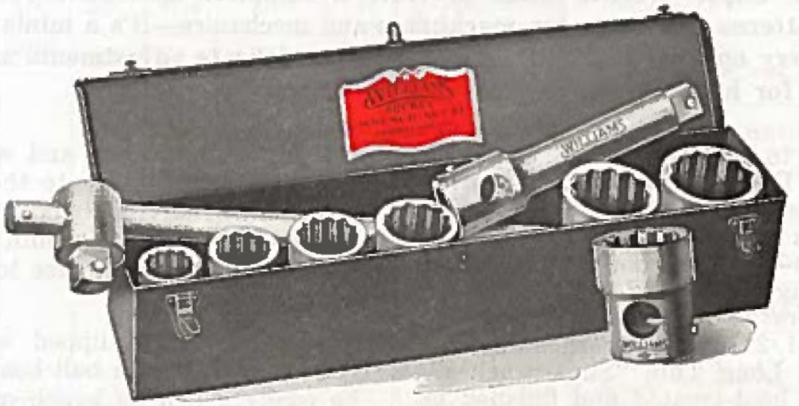
In Strong Steel Case, 21-1/4 x 7-1/8 x 4-5/8" — Total Weight 58 lbs.

Excellent for Bus and Truck Service

11 Sockets, 12-point openings 1-1/16, 1-1/8, 1-1/4, 1-3/8, 1-7/16, 1-1/2, 1-5/8, 1-13/16, 2, 2-3/16 and 2-3/8".

5 Accessories, Nos. NX-20B, NX-20C, NX-50, NX-110 and NX-115

SET No. 81



LIST PRICE, Complete—10 Pieces—$44.25

In Strong Steel Case, 21 x 4-3/8 x 4-1/4"
Total Weight, 32 lbs.

7 Sockets, openings 1-1/4, 1-7/16, 1-5/8, 1-13/16, 2, 2-3/16 and 2-3/8".

3 Accessories, Nos. NX-20B, NX-20C and NX-110.

A compact Set suitable where range of work required is more restricted.

+ REGISTERED TRADE MARK

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' SUPER WRENCH-CHEST No. 1001-A

"The Complete Tool Room"



LIST PRICE, Complete—$152.50
83 Pieces—44 Sockets, 39 Handles and Wrenches
In Strong Steel Case, 23 x 10-1/4 x 10"
Total Weight, 69 lbs.

Williams' Super Wrench-Chest provides a complete assortment of wrenches in numerous patterns and sizes for machinists and mechanics—it's a miniature tool room in itself. Every opening required, from 3/16", for delicate adjustments and fussy jobs, up to 1-5/8" for heavy work, requiring tools of rugged strength.

In addition to Midget, Bantam, Standard and Heavy Duty "Supersockets", with their Handles and Parts, there are 8 12-point Box "Superrenches" (Chrome-Molybdenum)—3 short double offset and 5 long 15° angle—with 12-point openings, 2 "Superpliers" Midget, 4-1/2" long — Standard—9-1/2"), a Hammerhead Screwdriver and 6 Long Thin "Superrenches". All tools are heat-treated and finished in chrome-plate, excepting "Superpliers".

The case and tray are of extra heavy metal, thoroughly reinforced at the corners. Continuous, full length "piano" hinges on both cover and "front door". The latter is deep and wide, providing complete accessibility to the bottom compartment. Individual tools can be readily located. The Chest is built to last a lifetime and is of ample size to accommodate additional tools.

The case is equipped with four ball casters, fitted with ball bearings, and can be easily rolled on bench or floor. It can also be carried comfortably, without disarranging the tools, by means of the strong metal "tote" handle on the top. A strong padlock with individual, duplicate keys is furnished.

(Contents listed on following page)

3-43

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' SUPER WRENCH-CHEST No. 1001-A

"The Complete Tool Room"

(Continued)

CONTENTS OF CHEST—"SUPERSOCKETS" and "SUPERRENCHES"

"SUPERSOCKETS"

Nominal Opening	No.	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nuts	List Price, Each
MIDGET PATTERN—Straight Wall—1/4" Sq. Dr.						
Hex	Stgt. Wall				Mch. Scr.	
3/16	NM-606				No. 2 & 3	$.45
7/32	NM-607					.45
1/4	NM-608				4	.45
9/32	NM-609					.45
12-Pt.						
5/16	NM-1210	1/8	1/8		5 & 6	.45
11/32	NM-1211				8	.45
3/8	NM-1212		3/16		10	.45
7/16	NM-1214		1/4	1/4	12 & 1/4	.45
BANTAM PATTERN—Straight Wall—3/8" Sq. Dr.						
12-Pt.	Stgt. Wall					
3/8	B-1212		3/16		*No. 10	.72
7/16	B-1214		1/4	1/4	1/4	.72
1/2	B-1216	1/4	5/16	5/16		.72
9/16	B-1218		3/8	3/8	5/16	.72
5/8	B-1220		7/16	7/16	3/8	.72
11/16	B-1222	3/8				.84
3/4	B-1224		1/2	1/2	7/16	.84
					*Mch. Scr. Nut	
STANDARD PATTERN—1/2" Sq. Drive						
12-pt.	Stgt. Wall					
7/16	ST-1214		1/4	1/4	1/4	.72
1/2	ST-1216	1/4	5/16	5/16		.72
9/16	ST-1218		3/8	3/8	5/16	.72
19/32	ST-1219	5/16				.72
5/8	ST-1220		7/16	7/16	3/8	.72
11/16	ST-1222	3/8				.84
3/4	ST-1224		1/2	1/2	7/16	.90
25/32	ST-1225	7/16				.90
13/16	ST-1226		9/16		1/2	.90
7/8	ST-1228	1/2	5/8	9/16	9/16	.90
15/16	ST-1230			5/8		1.08
31/32	ST-1231	9/16				1.08
1	ST-1232		3/4	11/16	5/8	1.08
	Extra Deep					
13/16	SD-1226		9/16		1/2	1.26
7/8	SD-1228T					1.26
1	SD-1232			5/8		1.50
1-1/8	SD-1236		7/8		3/4	1.68
Square	Taper Nose				Square	
1/2	S-416					.72
9/16	S-418				9/16	.72
Width Blade	Socket Bit					
15/16	SB-30					1.02
1-1/4	SB-40					1.38
HEAVY DUTY PATTERN—3/4" Sq. Drive						
12-Pt.	Taper					
1-1/16	H-1234	5/8		3/4		1.32
1-1/8	H-1236		7/8		3/4	1.38
1-1/4	H-1240	3/4		7/8		1.56
1-5/16	H-1242		1		7/8	1.56
1-3/8	H-1244					1.56
1-7/16	H-1246	7/8		1		1.86
1-1/2	H-1248		1-1/8		1	1.86
1-5/8	H-1252	1		1-1/8		2.16

SOCKET PARTS and WRENCHES

No.	Piece	List Price
MIDGET PATTERN—1/4" Sq. Drive		
NM-20A	Sliding T Handle—4-1/2" long	$1.02
NM-110	Extension—Driver, 5-3/8", with revolving, lockable Grip	1.44
BANTAM PATTERN—3/8" Sq. Drive		
F-15	Speeder—16-1/2" long, with knurled, revolving Grip	2.10
B-20A	Sliding T Handle—6-1/2" long	1.35
B-40	Flex Handle—8" long; flexible head. Knurled Grip with 3/8" square drive hole in end—for use as Extension	2.70
B-51	REVERSIBLE Ratchet, 6-1/2" long	4.50
B-110	Extension Bar—5-3/4" long	1.08
B-115	Extension Bar—10-1/2" long	1.20
B-140	Universal Joint	2.46
STANDARD PATTERN—1/2" Sq. Drive		
S-10P	Speeder—12" long, with "door knob" revolving Plastic Grip	2.70
S-15P	Speeder—17-1/2" long, with "door knob" revolving Plastic Grip	2.70
S-20A	Sliding T Handle—11" long	2.10
S-41	Extra Long Flex Handle—17"—flexible head. Knurled Grip with 1/2" square drive hole in end, for use as Extension; also 1/2" round hole for Bar	4.50
S-51	REVERSIBLE Ratchet, 10-1/2" long	6.75
S-110P	Extension Bar—5-1/2" long	1.20
S-115P	Extension Bar—10-1/2" long	1.65
S-140	Universal Joint	2.70
HEAVY DUTY PATTERN—3/4" Sq. Drive		
H-20A	Sliding T Handle—17-1/2" long	3.30
H-50	Ratchet, Complete—18-1/2" long	10.50
H-110	Extension Bar—8" long	2.70
H-115	Extension Bar—15-1/2" long	3.30
H-140	Universal Joint	7.50
LONG THIN "SUPERRENCHES"		
1090D	Openings 1/2 & 9/16"—8" long	.76
1090D		.76
1092F	Openings 5/8 & 11/16"—8" long	.82
1092F		.82
1094	Openings 3/4 & 7/8"—9" long	.88
1094		.88
12-POINT BOX "SUPERRENCHES"		
7723	3/8 & 7/16— 7-3/8"	.95
7025	1/2 & 19/32— 8-1/4" 15° Angle	1.00
7727	9/16 & 5/8 — 9-1/4" Offset,	1.05
7731A	3/4 & 7/8 —12" Long Pattern	1.40
7033C	15/16 & 1 —13-3/4"	1.85
9723	3/8 & 7/16— 4-1/2"	.95
9725	7/16 & 1/2 — 5-1/2" Double Offset	1.00
9727	9/16 & 5/8 — 6" Short Pattern	1.10
"SUPERPLIERS," ETC.		
1519	Midget, 4-1/2"; 4-position slip-joint plier	1.85
1520	Standard, 9-1/2"; 8-position slip-joint	2.20
1997	Hammerhead Screwdriver	1.30

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' +"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

ADAPTERS—For "Supersockets", Handles and Parts



MM-130
MM-131

BM-130
BS-130
BS-131
SH-130

HNX-130

HX-130

XX-130

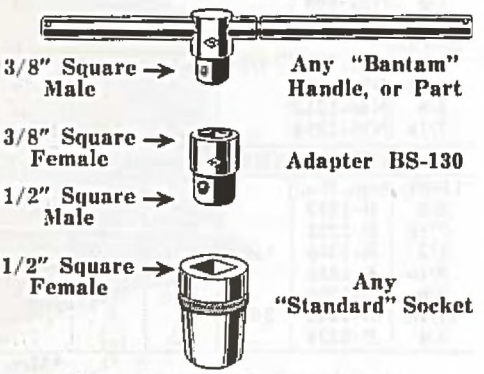
XX-131

XX-150

MM-150
HH-150

Williams' Adapters provide for the use of Sockets of one pattern with Handles and Parts of another pattern. See illustration at right showing, for instance, how Adapter BS-130 permits use of "Bantam" Handles (3/8" square male drive) with "Standard" Sockets (1/2" square female drive).

Finished in chrome-plate over nickel.



No.	ADAPTER	PRICE	No.
MM-130	1/4" square male and 9/32" square female. Adapts Sockets with 1/4" square drive-opening to Handles with 9/32" square drive-plug	$.90	MM-130
MM-131	9/32" square male and 1/4" square female. Adapts Sockets with 9/32" square drive-opening to Handles with 1/4" square drive-plug	.90	MM-131
MM-150	9/32" square male and 1/4" square male. Adapts Sockets with 9/32" square drive-opening to Ratchet with 1/4" square female drive; also, Ratchets with 9/32" square drive-opening to Sockets with 1/4" square female drive	.60	MM-150
BM-130	9/32" square male and 3/8" square female. Adapts "Bantam" Handles and Parts (3/8" square male drive) to "Midget" Sockets (9/32" square drive-opening)	.90	BM-130
BS-130	1/2" square male and 3/8" square female. Adapts "Bantam" Handles and Parts (3/8" square male drive) to "Standard" Sockets (1/2" square drive-opening)	1.02	BS-130
BS-131	3/8" square male and 1/2" square female. Adapts "Bantam" Sockets (3/8" square drive-opening) to "Standard" Handles and Parts (1/2" square male drive)	1.02	BS-131
SH-130	3/4" square male and 1/2" square female. Adapts "Standard" Handles and Parts (1/2" square male drive) to "Heavy Duty" Sockets (3/4" square female drive)	1.20	SH-130
HX-130	1" hex male and 3/4" square female. Adapts "Heavy Duty" Handles and Parts (3/4" square male drive) to Sockets with 1" hex female drive	1.50	HX-130
HNX-130	1" square male and 3/4" square female. Adapts "Heavy Duty" Handles and Parts (3/4" square male drive) to "Extra Heavy Duty" Sockets (1" square drive-opening)	1.50	HNX-130
XX-130	1" hex male and 1" square female. Adapts Sockets 1" hex drive-opening to Handles and Parts with 1" square male drive	3.30	XX-130
XX-131	1" hex female and 1" square male. Adapts Sockets 1" square drive-opening to Handles and Parts with 1" hex male drive	3.30	XX-131
HH-150	5/8" square male and 3/4" square male. Adapts Sockets with 5/8" square drive-opening to Ratchets with 3/4" square drive; also, Ratchets with 5/8" square drive to Sockets with 3/4" square drive-opening	1.50	HH-150
XX-150	1" square male and 1" hex male. Adapts Sockets with 1" square drive-opening to Ratchets with 1" hex male drive; also, Ratchets with 1" square drive to Sockets, 1" hex drive-opening	2.70	XX-150

+ REGISTERED TRADE MARK

3-43

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

FOR REFRIGERATION SERVICE

SET No. R-19

LIST PRICE
Complete, $18.50
19 Pieces

In Strong Steel Case
7-3/4 x 3-3/8 x 1-1/4"
Total Weight, 2-3/4 lbs.

This handy, compact assortment of "Supersocket" Wrenches has been carefully selected for servicing and repairing all makes of Electric Refrigerators. 14 slim, straight-wall Chrome-Alloy Sockets and 5 Accessories, including a specially designed Reversible Ratchet, described in table below; heat-treated and chrome-plated.

For Refrigeration Wheel Puller See Page 73



CONTENTS OF SET



M-406 to M-812

†Midget "Supersockets" 9/32" Square Drive

No.	Square Opening	Diameter Nose	Diameter Base	List Price
M-406	3/16	7/16	1/2	$.45
M-407	7/32	15/32	1/2	.45
M-408	1/4	1/2	1/2	.45
M-810	*5/16	9/16	9/16	.45
M-812	*3/8	11/16	11/16	.45

† All 7/8" long. * 8-Point Opening.



MR-15

Kerotest Valve Packing Nut Socket 9/32" Square Drive

No.	Oval Opening	Extreme Size Diam.	Extreme Size Length	List Price
MR-15	1/2 x 3/8	5/8	1-1/2	$1.00



B-1214 to B-1218

Bantam "Supersockets" 3/8" Square Drive

No.	12-Point Opening	Diameter Nose	Diameter Base	List Price
B-1214	7/16	39/64	21/32	$.72
B-1216	1/2	11/16	11/16	.72
B-1218	9/16	49/64	49/64	.72



MR-2 to MR-10

†Packing Gland Nut "Supersockets" 9/32" Square Drive

No.	Size Prongs Depth	Size Prongs Width	Diameter Inside	Diameter Outside	List Price
MR-2	3/32	5/64	21/64	7/16	$.75
MR-4	3/32	1/8	21/64	15/32	.75
MR-6	3/32	7/64	21/64	9/16	.75
MR-8	1/8	1/8	29/64	11/16	.75
MR-10	3/32	5/64	9/16	13/16	.75

† All 1-1/2" long.

HANDLES AND PARTS

No.	Piece	List
B-51A	Reversible "Superratchet"—6-1/2" long. Ratchet drives in head, 3/8" sq. male and 1/4" sq. female. Also, in end of handle, 3/16 and 1/4" sq. openings for delicate adjustment of valves. 24 teeth in ratchet-gear instead of usual 14 or 16. Turning Shift-lever reverses action instantly	$4.50
M-20A	Sliding T Handle—4-1/2" long; 9/32" square male drive	$1.02
B-110	Extension—5-1/2" long; 3/8" square drive, male and female	1.08
M-115	Extension—6" long; 9/32" square drive, male and female	1.08
MM-150	Plug Adapter—1" long; 1/4" square and 9/32" square	.60

For Additional Refrigeration Wrenches see page 45.

For Refrigeration Wheel Puller see page 73.

✦ REGISTERED TRADE MARK

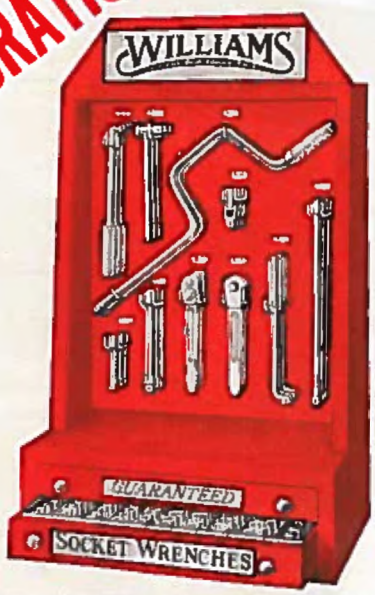
WILLIAMS' +"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

BANTAM PATTERN—3/8" Square Drive

DISPLAY CABINET No. 300

DISCONTINUED FOR "THE DURATION"



Assortment contains 56 Sockets 34 Accessories Total Weight, 44 lbs.

Extreme Size of Cabinet 26 3/4" high 15 1/2" wide 10" deep

LIST PRICE—Complete $114.30

This attractive "Silent Salesman" adds to your sales force, but not to your payroll. It is made of heavy metal and is sturdier and more durable than ordinary cabinets.

"Bantam" Straight Wall 12-point Sockets, 1/4 to 3/4" openings, with a wide variety of Handles and Parts, care for all needs in 3/8" square drive Socket Wrench combinations. Each compartment in the drawers is labeled to show the sizes of Sockets it contains. A convenient, efficient aid to increased sales at minimum cost.

Straight Wall Sockets — CONTENTS OF CABINET — Handles and Parts

Size Opening	No.	Quantity	Amer. Std. HEAVY Nut (U.S.S.). Size Bolt	Amer. Std. Hex Hd. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGLR. Nut; Size Bolt
‡1/4	B- 608	6				†No. 4
5/16	B-1210	6	1/8	1/8		†5 & 6
11/32	B-1211	6				†8
3/8	B-1212	6		3/16		†10
7/16	B-1214	6		1/4	1/4	1/4
1/2	B-1216	6	1/4	5/16	5/16	
9/16	B-1218	6		3/8	3/8	5/16
5/8	B-1220	6		7/16	7/16	3/8
11/16	B-1222	4	3/8			
3/4	B-1224	4		1/2	1/2	7/16

No.	Piece	Quantity
F-15	Speeder—16 1/2" long, with knurled revolving grip	3
B-20A	Sliding T Handle—6 1/2" long	3
B-30	Offset Handle—7 3/4" long	3
B-40	Flex Handle—8 1/2" long; flexible head, knurled grip with 3/8" drive-hole in end	3
B-50	Ratchet—6 1/2" long	2
B-51	REVERSIBLE Ratchet—6 1/2" long, 24 teeth in Ratchet-gear instead of usual 16	2
B-108	Extension Bar—3" long	3
B-110	Extension Bar—5 3/4" long	3
B-115	Extension Bar—10 1/4" long	3
BS-130	Adapter—3/8" square Female, 1/2" square Male	3
BS-131	Adapter—3/8" square Male; 1/2" square Female	3
B-140	Universal Joint	3

‡ With Hex Opening. † Machine Screw Nuts.

11 42

(For Bantam "Supersockets" and Parts, see page 50)

+ REGISTERED TRADE MARK

DISCONTINUED FOR THE DURATION"

WILLIAMS' +"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

STANDARD PATTERN—1/2" Square Drive

DISPLAY CABINET No. 600



Assortment contains 144 Sockets 35 Accessories Total Weight 130 lbs.

Extreme Size of Cabinet 33 3/4" high 20 1/2" wide 11" deep

LIST PRICE—Complete $243.30

This Cabinet is a miniature store in itself, providing most attractive display as well as handy storage for Williams' Socket Wrenches. The assortment includes Regular, Straight Wall and Extra Deep 12-point Sockets 7/16 to 1 1/4" and Square Sockets 5/16 to 1"—a sufficient spread to cover practically all popular needs. The variety of Handles and Parts provides wide selection in the type of Socket Wrench combination desired.

Made of heavy metal that will hold its shape—much better quality than ordinary cabinets. Each compartment in the drawers is labeled showing the size of Sockets in same.

Sockets — CONTENTS OF CABINET — Handles and Parts

Size Opening	Straight Wall 12-Point No.	Straight Wall 12-Point Quantity	Extra Deep 12-Point No.	Extra Deep 12-Point Quantity	Square No.	Square Quantity	No.	Piece	Quantity
5/16					S-410	3	S-10	Short Speeder—14 1/2". Knurled revolving grip...	2
3/8					S-412	3	S-15	Long Speeder—17 1/2". Knurled revolving grip...	2
7/16	ST-1214	6			S-414	3	S-20A	Sliding T Handle—11".....	3
1/2	ST-1216	8	SD-1216	1	S-416	3	S-40	Flex Handle—12" long; flexible head. Knurled grip with 1/2" square drive hole in end—may be used as Extension.....	3
9/16	ST-1218	8	SD-1218	1	S-418	3	S-41	Flex Handle—17 1/4" long. Similar to S-40, but has 1/2" round cross hole in grip for bar.....	3
19/32	ST-1219	6					S-50	Ratchet—10" long, complete with Locked-in Plug-Connector.....	1
5/8	ST-1220	8	SD-1220	1	S-420	2	S-51	REVERSIBLE Ratchet—10 1/2" long, 24 teeth in Ratchet-gear instead of usual 16. Turning Shift-lever reverses action instantly.....	2
21/32	ST-1221	4					S-110P	Short Extension—5 1/2" long.....	3
11/16	ST-1222	8	SD-1222	1	S-422	2	S-115P	Long Extension—10 1/2" long.....	3
3/4	ST-1224	8	SD-1224	1	S-424	2	S-140	Universal Joint.....	3
25/32	ST-1225	6					SB-30	Drag-Link Socket Bit—Size Blade, 7/32 x 15/16"...	2
13/16	ST-1226	6	SD-1226	2			SB-40	Drag-Link Socket Bit—Size Blade, 3/16 x 1 1/4"...	2
7/8	ST-1228	6	SD-1228	1	S-428	2	BS-130	Adapter—3/8" sq. female and 1/2" square male...	2
7/8			SD-1228T	2			BS-131	Adapter—3/8" sq. male and 1/2" sq. female.....	2
15/16	ST-1230	6	SD-1230	1			SH-130	Adapter—1/2" sq. female and 3/4" sq. male. Adapts "Standard" Handles and Parts to "Heavy Duty" Sockets.....	2
31/32	ST-1231	6							
1	ST-1232	6	SD-1232	2	S-432	2			
1 1/16	*S-1234	3							
1 1/8	*S-1236	3	SD-1236	2					
1 3/16	*S-1238	3							
1 1/4	*S-1240	3							

* Sockets with Taper Nose.

(For Standard "Supersockets" and Parts, see pages 52 and 53)

+ REGISTERED TRADE MARK

DISPLAY STAND
FOR
WILLIAMS' +"SUPERSOCKET" WRENCH SETS



Every "SUPERSOCKET" and Accessory is Fully Guaranteed

This compact stand 30" wide and 60" high, provides a most attractive and convenient means of displaying the most popular Williams' "Supersocket" Sets.

A convenient rack for holding literature describing them is provided on the back of the panel at the top.

The stand, mounted on casters, is made entirely of metal, enameled in orange. The panel at the top is lettered in black and gold. The rich orange of the stand makes a pleasing contrast to the dark gray of the boxes with their labels in gold, black and orange.

This display is a real "Silent Salesman"—dealers find it a very efficient aid. It is loaned only for the display of Williams' "Supersocket" Sets.

+ REGISTERED TRADE MARK

11-42

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

WILLIAMS' ✦"SUPERSOCKET" WRENCHES

Chrome-plated over Nickel

IMPROVED WRENCH SETS FOR HOLLOW-SCREWS

SET No. AL-100

This Set of Williams' detachable "Supersocket" Bits and Parts provides especially efficient wrenches for all popular hollow (hex socket) set screws and cap screws; see table.

Replacing old type L-shape wrenches, bent from hex bar steel, these tools provide all the advantages of the Detachable Socket Wrench system for users of Hollow-Screws.

Detachable "Bits," with projecting hex plug, are substituted for conventional detachable sockets. Only Williams' Bits have knurled end for fast spinning of screws before tightening them with handle, or driver.



LIST PRICE, Complete—19 Pieces—$25.00
In Fitted Steel Case, 13 x 7-1/2 x 1-3/4"
Total Weight, 10 lbs.

Flex Handle M-42 supplies all the convenience and advantages of a handle with flexible head. With Bar inserted it becomes a Sliding T Handle, with long shank for reaching buried screws.

"Superratchets" B-51 and S-51, instantly reversible, are rugged, drop-forged tools without delicate springs, or other fragile construction. Operate in one-third less space than conventional ratchets.

Bits and Parts, made from alloy steel, are heat-treated in electric furnaces. They interchange in Williams' regular Bantam and Standard "Supersocket" lines.

CONTENTS OF SET No. AL-100

10 "SUPERSOCKET" BITS					
Bit No.	Hex. Plug, Size	Sq. Drive	LIST PRICE	For Hollow Screws	
				Set Screw	Cap Screw
AM-604	1/8	9/32	$.60	1/4	No. 8
AM-605	5/32	9/32	.60	5/16	10 & 12
AM-606	3/16	9/32	.60	3/8	1/4
AM-607	7/32	9/32	.60	7/16	5/16
AB-608	1/4	3/8	.75	1/2 & 9/16	
AB-610	5/16	3/8	.75	5/8	3/8 & 7/16
AS-612	3/8	1/2	.85	3/4	1/2 & 9/16
AS-616	1/2	1/2	.85	7/8	5/8
AS-618	9/16	1/2	.85	1 & 1 1/8	3/4 & 7/8
AS-620	5/8	1/2	.85	1 1/4 & 1 3/8	1

No.	9 HANDLES and PARTS	LIST
B-20A	Sliding T Handle—6-1/2" long....	$1.35
B-51	Reversible "Superratchet"—6-1/2". Reverses instantly.....	4.50
B-110	Extension—5-1/2" long.....	1.08
BM-130	Adapter—3/8" Square Female and 9/32" Square Male.....	.90
M-42	Flex Handle only—5-1/2" long; flexible head, knurled grip, cross hole for Sliding Bar.....	1.40
Bar	Sliding Bar—4-1/2"; for M-42....	.25
S-20A	Sliding T Handle—11" long.....	2.10
S-51	Reversible "Superratchet"—10-1/2". Reverses instantly	6.75
S-110P	Extension—5-1/2"long	1.20

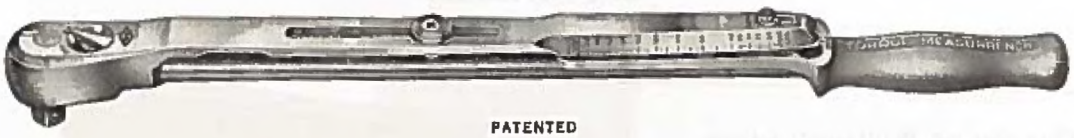
✦ REGISTERED TRADE MARK

NOTICE—National Emergency and Critical Metal Shortage make Finish and Material substitutions necessary without notice or regard to catalog descriptions

THE NEW WILLIAMS' TORQUE +"MEASURRENCH" No. S-57

REVERSIBLE RATCHET WITH R. H. TORQUE INDICATING SIGNAL

Standard Pattern—1/2" Square Drive



PATENTED

LIST PRICE, Complete—$26.00

Closely limited torque application is essential in automotive, aviation and Diesel motors; also for many industrial appliances. Such fine adjustments make an efficient indicator of torque a vital necessity in modern practice. "Measurrench" solves the problem *wherever* limited and equal tension is required on nuts, bolts, studs, etc. Designed especially for use with Williams' Standard "Supersockets", but can be applied to any detachable socket having 1/2" square drive opening.

Williams' Ratchet Torque "Measurrench" is the most efficient and durable tool for torque indicating service on the market. It combines new mechanical features with Williams' standards of superior quality and design, resulting in an unusually strong, effective tool at moderate price.

Wrench may be used in two ways, as below:—

By Sight Reading—An easily read scale on the handle indicates applied tightening pressures from 20 to 200 foot-pounds.

By Sound Reading—A sharp sound signal is given for any desired torque from 35 to 200 foot-pounds, by setting the simple sound device.

Accuracy does not depend on delicate gears, levers, or dials, but upon rugged sections of high tensile steel. Although right hand torque only is measured, the wrench action reverses for left hand turning.

Simple in design and sturdy in construction, the reversible ratchet mechanism is a highly desirable feature. The 36-tooth ratchet wheel, with Williams' twin double-tooth, oscillating pawl provides constant engagement with TWO teeth of ratchet-gear in both ON and OFF rotation of nuts.

It makes possible the unusually short operating swing of only 1/30 of a full turn; obstruction hazards are reduced to the minimum. The wrench action is instantly reversed by a mere flip of the shifter, which is flush with the head.

The well balanced drop-forged handle, with specially designed grip, is 19-1/2" long for ample leverage; the head is exceptionally compact and free from protrusions, for easy use in close places.

Every part is made of alloy and high tensile steel, accurately machined and heat-treated. Chrome-plated, with entire top and sides of head and calibrated bar buffed; handle, "satin" chrome. Packed in individual cardboard box.

With each wrench is supplied a chart giving the foot-pounds tension to be applied on cylinder heads, connecting rods, main bearings, etc. This data covers all popular cars and trucks, as recommended by their manufacturers.

USE WILLIAMS' TORQUE "MEASURRENCH"

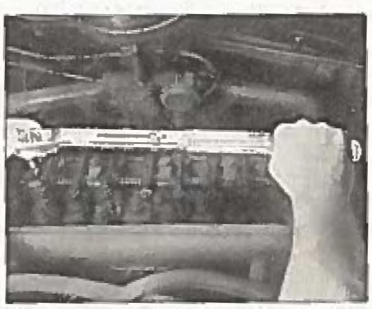
FOR

limiting torque in tightening nuts and bolts in DIE CAST ALLOY METAL PARTS.



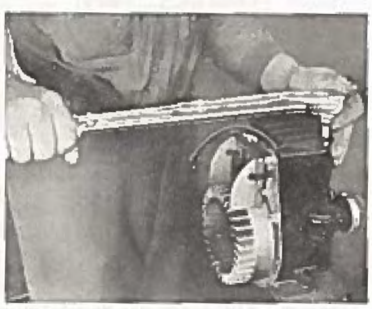
FOR

accurately following MANUFACTURERS' SPECIFIED TENSIONS.



FOR

all applications which require EQUAL TENSION ON NUTS, STUDS, BOLTS, ETC.

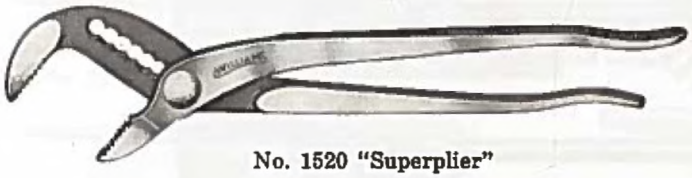


For full line of Standard Sockets and Parts, see pages 52 and 53

+ REGISTERED TRADE MARK

11-42

WILLIAMS' PLIERS



No. 1520 "Superplier"



No. 1519 "Superplier"



Nos. 5 to 10



No. 36



No. 46



No. 57



Nos. 76 and 77

"SUPERPLIERS"

(Slip-Joint)

These "Superpliers" have thin, narrow jaws for use in extremely close places and are drop-forged from tough Chrome-Alloy steel. The bolt provides the greatest strength and rigidity possible in thin, slip-joint construction.

Midget No. 1519, 4-position joint opens 0 to 9/16", with jaws parallel at the most important openings. Efficient for wiring, panel, switchboard, radio, and other delicate work. Cadmium-plated.

Standard No. 1520 is long and slim; 8-position joint opens 0 to 2". Knurled handles provide firm hand grip. Gray satin finish, faces polished.

No.	Length	LIST PRICE
1519	4-1/2	$1.85
1520	9-1/2	2.20

NEEDLE NOSE SIDE-CUTTING PLIERS

DISCONTINUED FOR THE DURATION

Long thin nose for close quarters, with side-cutting jaws. Knurled handles blued, head polished bright.

No.	Length	LIST PRICE
76	6	$2.40
77	7	2.70

Weights, page L.

COMBINATION PLIERS

(Slip-Joint)

This line of Combination Pliers, with 2-position slip-joint, is very efficient for general service. All are sturdy, well designed tools. Drop-forged from special steel, with knurled handles; polished and nickel-plated.

The Combination Plier No. 36 is equipped with durable side cutting jaws.

DISCONTINUED FOR THE DURATION

No.	Pattern	Length	LIST PRICE
5	Regular	5	$.65
6	"	6	.70
8	"	8	.90
10	"	10	1.25
36	Side-Cutting	6	.90

DIAGONAL CUTTING PLIERS

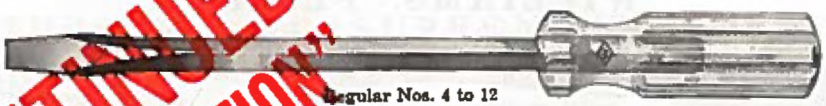
DISCONTINUED FOR THE DURATION

Mechanics and Electricians find many varied uses for these rugged tools. They are drop-forged from special tough steel; cutting-edge is made for lasting service. No. 46 has knurled handles; full polished finish. No. 57 has broader and more powerful jaws for heavy duty; head polished.

No.	Pattern	Length	LIST PRICE
46	Regular	6	$1.25
57	Heavy Duty	7	2.30

WILLIAMS' SCREW DRIVERS

DISCONTINUED FOR "THE DURATION"



Regular Nos. 4 to 12



Regular Nos. 24 to 32



Electricians' Nos. 43 to 50



Regular Stubby No. 62



Pocket No. 52



Phillips Stubby No. WP-62



Phillips Nos. WP-1 to WP-4



Phillips No. CP-4

Williams' Regular, Electricians', Pocket and Stubby (adjusting) Screw Drivers are all fitted with handles of a tough transparent composition, an insulator of electricity. Fluted for sure, comfortable grip. The blades, hardened and tempered throughout their entire length, are solidly anchored in the handles.

Regular patterns are available with either square or round blades. Electricians' have round blades and the Stubby a square blade. The Pocket has round blade and is fitted with pocket clip, as illustrated.

FOR PHILLIPS SCREWS

Williams' Screw Drivers, Nos. WP-1 to WP-4, will fit the entire range of Phillips recessed-head screws. These, and the Phillips Stubby (adjusting), Screw Driver have round chrome-alloy blades, hardened and tempered, that are securely anchored in superior hard wood, fluted handles.

The No. CP-4 Phillips Screw Driver has a transparent composition handle and a blade that is hexagon for more than half of its length. This permits the use of a wrench for added leverage.

All Screw Drivers packed 6 in cardboard box, excepting No. 52, 12 per box.

No.	Blade Length	Stock Size	Tip Width	Price
REGULAR—SQUARE BLADE—COMPOSITION HANDLE				
4	4	1/4	5/16	$1.05
6	6	5/16	5/16	1.40
6B	6	3/8	3/8	1.55
8	8	3/8	3/8	1.75
12	12	3/8	3/8	2.10
REGULAR—ROUND BLADE—COMPOSITION HANDLE				
24	4	1/4	1/4	$.95
26	6	5/16	5/16	1.30
28	8	3/8	3/8	1.60
32	12	3/8	3/8	1.95
ELECTRICIANS'—Round Blade—Composition Handle				
43	3	3/16	3/16	$.75
46	6	3/16	3/16	.95
50	10	3/16	3/16	1.10
POCKET (with Clip)—Round Blade—Composition Handle				
52	2-1/4	1/8	1/8	.32
REGULAR STUBBY (Adjusting)—Composition Handle				
62	1-1/2	1/4	5/16	.65
PHILLIPS—Wood Handle				
No.	Fits Screws No.	Blade Length	Stock Size	Price
WP-1	4 and Smaller	3	9/64	.60
WP-2	5 to 9 incl.	4	1/4	.65
WP-3	10 to 16 incl.	6	5/16	.75
WP-4	18 and larger	8	3/8	.95
PHILLIPS—COMPOSITION HANDLE				
CP-4	18 and larger	6	3/8	2.30
PHILLIPS STUBBY (Adjusting)—WOOD HANDLE				
WP-62	5 to 9 incl.	1-1/2	1/4	.55



PHILLIPS SCREW DRIVER SET NO. WP-14

LIST PRICE, $2.95
Complete In Cardboard Box

This Set of four Phillips Screw Drivers consists of one each of Numbers WP-1, WP-2, WP-3, and WP-4, packed in a cardboard box. This combination covers the entire range of Phillips Screws. Their round, chrome-alloy blades are securely anchored in superior hard wood, fluted handles.

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WILLIAMS' PUNCHES and CHISELS

DISCONTINUED FOR "THE DURATION"



Williams' Punches are forged from high grade octagon alloy steel, properly hardened and tempered to stand up under the most severe service. Body finished in black, with the taper and head full polished. Packed 6 in cardboard box.

No.	Point Diam.	Stock Size	Length	List Price
PIN PUNCHES				
P-4	1/8	3/8	6	$.54
P-6	3/16	1/2	6	.62
P-8	1/4	5/8	8	.77
SOLID PUNCHES				
P-13	3/32	1/2	6	.62
P-14	1/8	1/2	8	.77
LONG TAPER PUNCHES				
P-25	5/32	3/8	9	.75
P-26	3/16	1/2	10	.85
PRICK PUNCH				
P-30		3/8	5	.45
CENTER PUNCH				
P-40		3/8	5	.45



COLD, or FLAT CHISELS

Williams' Chisels, of high grade octagon alloy steel, are carefully forged, hardened and tempered. Amply hard for work on tempered material, yet soft enough to minimize chipping and to permit resharpening with a file. Body finished in black with full polished bit and head. Packed 6 in cardboard box, excepting No. C-36, 3 in a box.

RIVET BUSTER

Designed especially for cutting off hardened rivet heads. A great time saver when used for this purpose, instead of the ordinary chisel. Packed 3 in a box.

No.	Width of Cut.	Stock Size	Length	List Price
COLD, or FLAT CHISELS				
C-8	1/4	1/4	4 3/4	$.54
C-12	3/8	3/8	5 1/2	.62
C-16	1/2	1/2	6	.73
C-20	5/8	5/8	6 1/2	.85
C-24	3/4	3/4	7	1.05
C-36	1 1/8	1	8	1.65
RIVET BUSTER				
C-422	11/16	3/4	12	1.65

WILLIAMS' WHEEL PULLER No. 5
FOR REFRIGERATION SERVICE

DISCONTINUED FOR "THE DURATION"

This Williams' Wheel Puller is a simple efficient tool developed for the many pulling jobs in Refrigeration Service, such as flywheels, fans and pulleys. It can also be used for many pulling jobs on electric motors, etc.

The body, forged from high tensile steel, has four sockets into which either two or all three of the arms may be placed in various positions, providing a combination of grips. Flywheels with even or odd numbers of spokes are pulled with equal ease. All three arms are necessary for odd-spoked wheels, while only two are needed for an even number of spokes. The pulling capacity is 7" diameter.

Easily adjusted arms, processed from alloy steel, are held in place by an endless spring. They are instantly reversible by merely turning the arm in the socket for either internal or external pulling. This feature eliminates the need of removing or repositioning the arms.

The hex head of the power screw, on which any convenient wrench can be used, has a knurled band to facilitate rapid hand turning. Its cone point fits into the center-hole of the shaft end.

For Refrigeration Wrenches see page 45. For Refrigeration "Supersocket" Set see page 65.



*** LIST PRICE**
Complete—$12.25

No.	Capacity Diameter	Body Diameter	Length Arms	*List Prices, Puller and Extra Parts				
				Arms Each	Screw	Spring	Complete	No.
5	7	3 1/4	4 1/4	$2.25	$3.20	$.65	$12.25	5

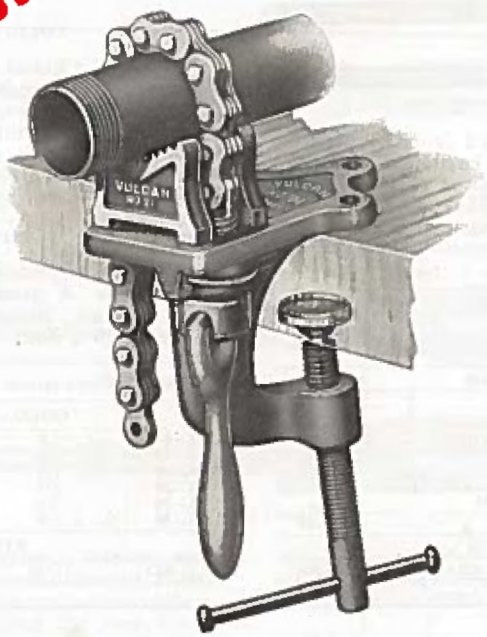
Weights, page L.

***Subject to Liberal Discount.**

WILLIAMS' +"VULCAN" CLAMP KIT VISE NO. 21

For Pipe 1/8 to 2 inches

TO BE DISCONTINUED WHEN PRESENT STOCK IS EXHAUSTED



"Small in size—
Great Otherwise"

LIST PRICE, $9.60

RAPID ACTION
POSITIVE GRIP
RIGID
COMPACT
LIGHT

This Clamp Kit Vise can be readily and firmly attached to bench, post, or other support without the use of bolts, or screws. Easily carried; weighs only 5-3/4 lbs.

The clamping device is very efficient. The clamp member is integral with the base; the clamp-screw, set at a slight forward angle (as illustrated), carries a swivel with thin V lip projecting from its upper edge. Consequently, the Vise can be securely and rigidly attached to support.

The drop-forged jaws are saw-tempered for file-sharpening. Chains are of the same superior quality as those in Williams' "Vulcan" Tongs. Jaws, chain, nut and handle are interchangeable with similar parts of "Vulcan" Vise No. 1.

Packed one in a box for convenient shelving.

Orders for Chains take Screw also, unless otherwise specified.

No.	For Pipe, Sizes	Weight Each, Lbs.	LIST PRICES, VISES and EXTRA PARTS							No.
			Vise, Complete	Jaws, Pair	Chain with Screw	Chain Screw Only	Handle with Nut	Nut Only	Clamp Screw & Swivel	
21	1/8 to *2"	5 3/4	$9.60	$3.00	$2.50	$.80	$2.20	$1.40	$2.00	21

*Will grip pipe fittings not larger in diameter than 2½" pipe.

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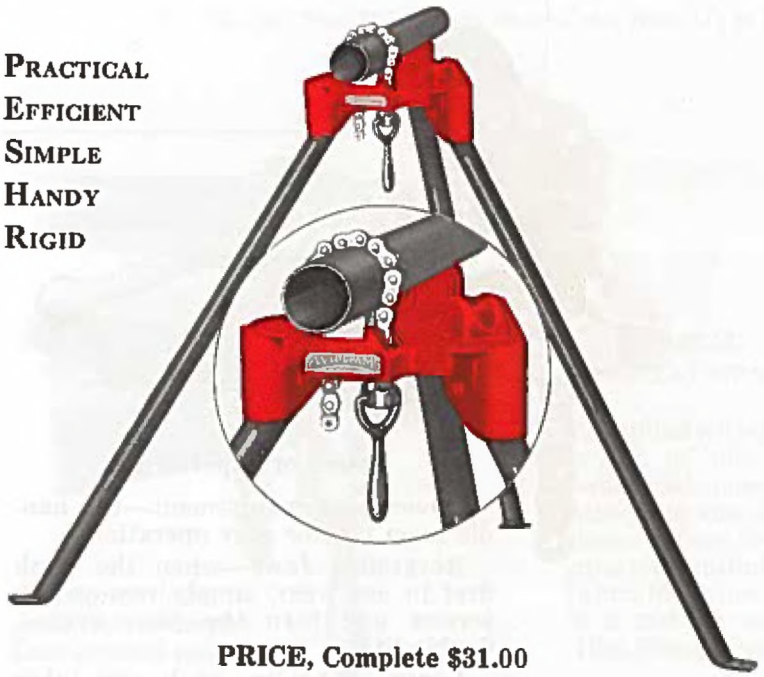
+ REGISTERED TRADE MARK

3—IN—1

WILLIAMS' +"VULCAN" VISE STAND NO. V-1

VISE—STAND—PIPE BENDER

PRACTICAL
EFFICIENT
SIMPLE
HANDY
RIGID



PRICE, Complete $31.00
Stand—Vise—Pipe Bender



Folded for carrying— Weight 35 lbs.

Williams' "Vulcan" Vise Stand combines all the advantages of the Chain Pipe Vise with a firm and rigid, yet easily portable stand. It is a most efficient tool for all pipe, 1/8 to 2 inches, at very moderate price.

Base (high grade malleable iron) is heavily reinforced under the aprons to prevent distortion in severe service. In addition to "V" pipe support in rear, recess for oil can and slots for handy arrangement of tools are provided.

Pipe Bender handles pipe up to 3/4 inch.

Legs are 1" pipe, with upset feet, punched for fastening to floor, if desired. Even without such fastening, they provide firm, stable support. For easy carrying, the legs fold and may be tied together by a permanently attached chain (see illustration).

Jaw—tool steel, carefully hardened and tempered—grips along its entire length. No bending of the smaller sizes of pipe.

Chain, Nut and **Handle** are of tough wrought steel. All three are the same as and are interchangeable with those supplied with Williams' "Vulcan" Vise No. 1—the original Chain Pipe Vise and the favorite for over 40 years.

All parts of Vise Stand are interchangeable.

Vise Stand No.	For Pipe Sizes	Weight, Complete	LIST PRICES, STAND COMPLETE and VISE PARTS						Nut Only
			Stand, Complete	Jaw Only	Chain with Screw	Chain Screw Only	Handle with Nut	Handle Only	
V-1	1/8 to *2"	35 lbs.	$31.00	$3.20	$2.50	$.80	$2.20	$1.50	$1.40

* Will grip pipe fittings not larger in diameter than 2½" pipe.

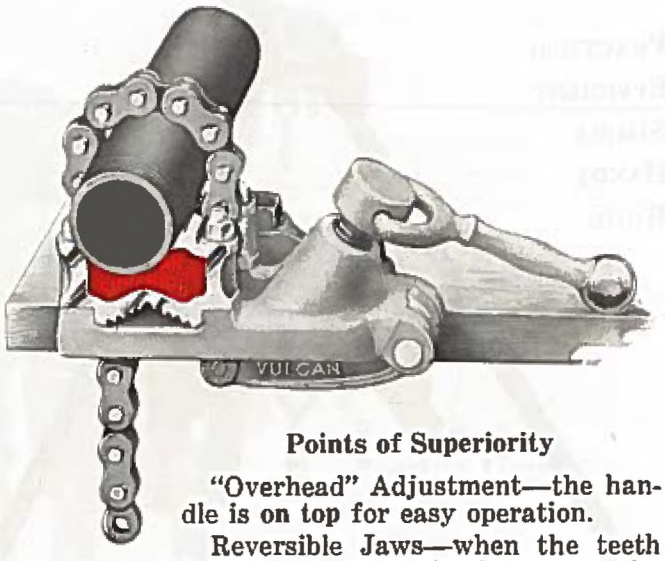
+ REGISTERED TRADE MARK

WILLIAMS' +"VULCAN SUPERIOR" DROP-FORGED CHAIN PIPE VISE



METAL DISPLAY STAND

Supplied with short length of pipe and bolts and nuts for attaching vise No. 11. Space in base for circulars. Stand finished in bright orange. One in a carton; weight 6-3/4 lbs. Free to Dealers.



Points of Superiority

"Overhead" Adjustment—the handle is on top for easy operation.

Reversible Jaws—when the teeth first in use wear, simply remove the screws and turn the jaws over—double life.

Larger Capacity—each vise takes pipe 1/2" larger than other chain vises of similar size.

The "Vulcan Superior" Vise provides all the reliability of Williams' old "Vulcan"—the ORIGINAL Chain Pipe Vise and the favorite for more than 30 years—together with the convenience of "overhead" adjustment. **Reversible** jaws, too, for longer life.

Wholly made from tough wrought steel—no castings are tolerated. **Drop-Forged** base, jaws, handle and chain-arm. The chains are of the same unsurpassed quality as those of the widely established "Vulcan" Chain Pipe Tongs. Unbreakable, rapid in action, positive in grip. Fully guaranteed.

Supplied in 2 styles of finish—see table. Packed one in a box.

Chrome-plated will be furnished, unless otherwise specified

No.	For Pipe, Sizes	Wt. Each, Lbs.	Jaws, Pair	Chain, without Arm	Screw	Handle with Screw	Chain Arm	VISE Complete	No.
			* Price, Chrome-plated Finish, Edges of Jaws Bright						
*11	1/8 to 2 1/2	7	$4.00	$2.20	$1.15	$2.80	$1.40	$12.00	11
*12	1/4 to 4 1/2	15	9.00	4.00	1.65	4.15	2.25	22.00	12
			Price, Standard Finish—Shot-blasted, Orange Panel in Jaws						
11	1/8 to 2 1/2	7	$3.30	$2.00	$1.00	$2.35	$1.20	$10.00	11
12	1/4 to 4 1/2	15	7.70	3.60	1.45	3.50	1.85	19.00	12

+ REGISTERED TRADE MARK

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*To be Discontinued when present stock is exhausted.

WILLIAMS' GENUINE +"VULCAN"
THE ORIGINAL
DROP-FORGED CHAIN PIPE VISE

For Holding Pipe, Bolts, Bars, Shafts, etc., from 1/8 to 8 inches in Diameter



Standard Finish—jaws have bright face around panel.

METAL DISPLAY STAND

Supplied with short length of pipe and bolts and nuts for attaching vise No. 1. Space in base for circulars. Stand finished in bright orange. One in a carton; weight 4 lbs. Free to Dealers.



These Vises are unbreakable, light, compact, rapid in action and positive in gripping pipe. All are readily fastened to bench or post. The smaller sizes are well adapted for carrying by hand or in tool bag.

Adjustment is quickly effected by engaging the projecting rivets of the chain with a series of stepped bosses on the base, when the vise may be instantly locked in an unbreakable grip by a turn of the handle.

They are made entirely of wrought steel; the drop-forged jaws are of saw-tempered steel for file-sharpening. The chains are of same quality as those of our "Vulcan" Chain Pipe Tongs; all parts are fully guaranteed and replacements carried in stock.

All Vises are packed in individual boxes for convenient shelving. Six of Nos. 1 and 2 boxes to a carton.

Orders for Chains take Screw also, unless otherwise specified.

No.	For Pipe, Sizes	Size, Folded for Packing	Wgt. Each, Lbs.	List Prices, Vises and Extra Parts							No.
				Jaws Pair	Chain with Screw	Screw	Handle with Nut	Handle Only	Nut	Vise Complete	
1	1/8 to *2	4 x 5 x 6	4	$ 3.00	$ 2.50	$.80	$2.20	$1.50	$1.40	$ 7.00	1
2	1/4 to 4	6 x 8 x 8	10	7.00	4.80	1.40	4.20	3.00	2.70	15.00	2
3	1/2 to 6	8 x 9 x 11	18	12.00	9.00	2.50	7.00	5.00	4.00	27.00	3
4	1/2 to 8	8 x 10 x 12	30	18.00	12.00	2.50	7.00	5.00	4.00	36.00	4

*Will grip pipe fittings not larger in diameter than 2-1/2" pipe.

+ REGISTERED TRADE MARK

FLAT LINK CHAINS

For All Williams' "Vulcan" Chain Pipe Tongs

THREE TYPES

1. STANDARD



Plain links without any markings as illustrated. Natural, tumbled steel finish.

2. "XTRA-STRONG"



Marked on first flat link as illustrated. Finished black all over.

3. ✦"SUPERCHAIN"



Identified by markings stamped on each link as illustrated. Finished completely in cadmium-plate.

There are three different types of Flat Link Chains for Williams' Tongs—STANDARD, "XTRA-STRONG" and "SUPERCHAIN."

1. **Standard Chains** are made of special high tensile carbon steel and each is proof-tested as described below. Standard chains are interchangeable, size for size, on the following Tongs with which they are furnished as original equipment: *"Vulcan," "Improved Vulcan," "Vulcan Superior"* and *"Vulcan Boll-Weevil."* Standard Chains should *not* be used with "Supertongs," or with the "Boll-Weevil Zephyr."

2. **"Xtra-Strong" Chains** are made from special high tensile carbon steel, heat-treated to give approximately 40% more strength than Standard Chains. These Chains are proof-tested as described below. Furnished at extra charge, they are interchangeable, size for size, on *"Vulcan Superior," "Vulcan," "Improved Vulcan"* and *"Vulcan Boll-Weevil."*

3. **"Superchains"** (Flat Link type only) are made from Alloy Steel, heat-treated and cadmium-plated. Each "Superchain" is proof-tested as described below. Furnished as original equipment on "Vulcan Supertongs," "Superchains" are interchangeable, size for size, and can be supplied at extra cost on all Williams' Tongs except the "Boll-Weevil Zephyr." Due to extra length, "Zephyr" Superchains are *not* interchangeable with any other pattern of tongs. They must be ordered specifically by number for exact "Zephyr" size desired.

Proof-Testing. Each Chain, regardless of type, is individually *"proof-tested"* on a standard tension machine *to two-thirds of its breaking strain.* Every chain so tested is stamped **O** on the drop-forged swinging-link and to it is attached a leaden seal, bearing our trademark ⟨W⟩. Every Flat Link Chain leaving our works *must* bear this mark and seal—the Proof of Quality—as evidence that it has passed our standardized proof-tests.

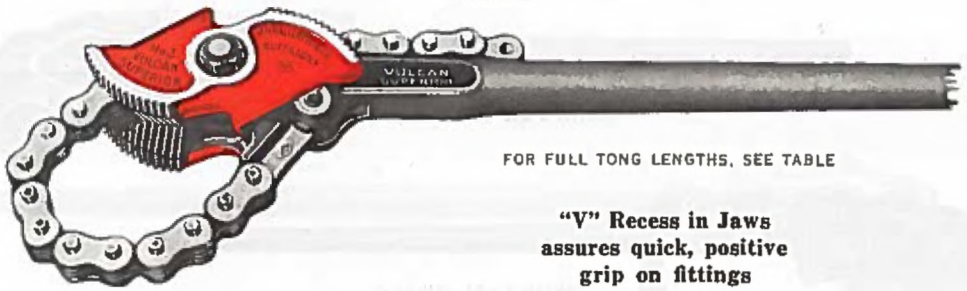
✦ REGISTERED TRADE MARK

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WILLIAMS' ✦"VULCAN SUPERIOR" DROP-FORGED PIPE-AND-FITTINGS TONGS

For Both Pipe and Fittings, 1/8 to 12 in.

PATENTED



FOR FULL TONG LENGTHS, SEE TABLE

"V" Recess in Jaws assures quick, positive grip on fittings

In no other tongs on the market can all these desirable "Vulcan Superior" features be obtained:—

1. **Universal Service**—Two tools in one. Always ready "as is" for either pipe or fittings. Two tools as commonly used (one for pipe, one for fittings) are unnecessary.

2. **"V" Recess** in the jaws, combined with their general design, gives "Vulcan Superior" a greater number of grips or "bites," both on pipe and fittings, than ordinary tongs. One-spot wear on the teeth is prevented and easier operation provided. Increased strength and greater ease in handling results.

3. **Reversible** pipe-and-fittings jaws. When the teeth first in use wear, simply unscrew the bolt and turn the jaws end-for-end.

4. **Chains***—Either Flat Link Chain, or Cable Chain, as desired.

5. **Proof-Testing.** Each Flat Link Chain is individually *"proof-tested"* on a standard tension machine *to two-thirds of its breaking strain.* Every chain so tested is stamped **O** on the drop-forged swinging-link and to it is attached a leaden seal, bearing our trade mark ⟨W⟩ Every Flat Link Chain leaving our works must bear this mark and seal—the Proof of Quality—as evidence that it has passed our standardized proof-tests.

Wholly made from tough wrought steel; all parts are interchangeable.

Number	0	1	2	3	3 1/2	4	5
For Pipe and Fittings, inches.	1/8 to 3/4	1/8 to 1 1/2	1/4 to 2 1/2	3/4 to 4	1 to 6	1 1/2 to 8	2 to 12
Extreme Length	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2
Weight, lbs.	2	5 1/2	10	17	26	34	54
Standard Flat Link Chain,							
Breaking Strain, lbs.	3,600	6,700	9,800	12,500	14,300	15,700	21,800
Cable Chain,							
Breaking Strain, lbs.	1,800	6,000	9,000	12,500	14,300	15,700	21,800
LIST PRICE, Complete	**$5.00**	**$7.00**	**$10.00**	**$14.00**	**$18.00**	**$22.00**	**$36.00**
*Extra Std. Flat or Cable Chain	1.50	2.00	3.00	5.00	7.00	9.00	15.00
†Extra Jaws, per pair	2.00	3.50	5.50	8.00	9.50	11.00	15.00
Extra Bolt and Nut, per set	.28	.36	.46	.60	.70	.90	1.30

† Extra Jaws supplied in pairs unless otherwise called for. If only a single jaw is wanted, specify Right or Left.

"Vulcan Superior" Tongs can be furnished with "Xtra-Strong" Flat Chain if specified, at small extra charge.

*** See opposite page for data on Flat Link Chains.**

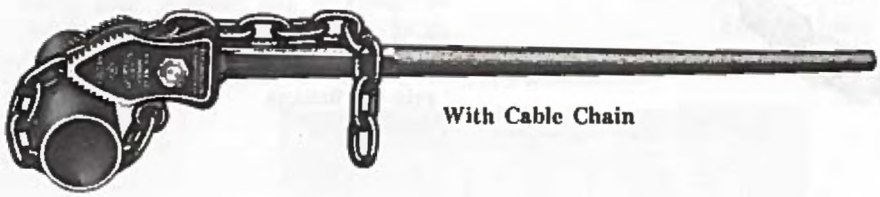
✦ REGISTERED TRADE MARK

WILLIAMS' GENUINE +"VULCAN" DROP-FORGED CHAIN PIPE TONGS

For Turning, or Holding 1/8 to 18 in. Pipe



With Flat Link Chain



With Cable Chain

The Original "Vulcan," introduced by Williams forty years ago, is still the oil-fields' favorite tongs for general work. All "Vulcans" are made entirely from tough wrought steel and are fully guaranteed.

Chains* swing from the center and can be used on either side of the jaws, thus reducing to the minimum, wear upon specific teeth.

Proof-testing. To insure proper service, each Flat Link Chain is *"proof-tested"* in a standard tension machine *to two-thirds of its breaking strain* listed in table. Each Chain, so tested, is stamped O on the drop-forged swinging link and to it is attached a leaden seal bearing our trademark Ⓦ thus absolutely establishing the safety-factor and reliability of every tong.

The jaws are fastened to the handle by extra size through bolt and U. S. Standard Nut.

Number	10	11	12	13	13 1/2	14	15	16
Capacity Size Pipe, inches	1/8 to 3/4	1/8 to 1 1/2	1/4 to 2 1/2	3/4 to 4	1 to 6	1 1/2 to 8	2 to 12	4 to 18
Extreme Length	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2	87
Weight	2	5 3/4	10	17	24	31	52	137
Flat Standard Chain								
Length	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2	74 1/2
Breaking Strain, lbs.	3,600	6,700	9,800	12,500	14,300	15,700	21,800	40,000
Cable Chain								
Length	9 3/4	14 1/2	18	27	33 1/2	42	57	76
Breaking Strain, lbs.	1,800	6,000	9,000	12,500	14,300	15,700	21,800	40,000
LIST PRICE, Complete with Flat Standard or Cable Chain	**$5.00**	**$7.00**	**$10.00**	**$14.00**	**$18.00**	**$22.00**	**$36.00**	**$80.00**
*Extra Standard Flat or Cable Chain	1.50	2.00	3.00	5.00	7.00	9.00	15.00	40.00
Extra Jaws, pair	2.00	3.50	5.50	8.00	9.50	11.00	15.00	32.00
Extra Bolt and Nut, per set	.28	.36	.46	.60	.70	.90	1.30	2.50
Flat "Xtra-Strong" Chain, Number	**X 10**	**X 11**	**X 12**	**X 13**	**X 13 1/2**	**X 14**	**X 15**	**X 16**
Length	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2	74 1/2
Breaking Strain, lbs.	5,070	9,400	13,800	17,600	20,100	22,000	31,000	56,000
LIST PRICE, Complete with Flat "Xtra-Strong" Chain	**$5.15**	**$7.20**	**$10.30**	**$14.50**	**$18.70**	**$22.90**	**$37.50**	**$84.00**
*"Xtra-Strong" Chain Only	1.65	2.20	3.30	5.50	7.70	9.90	16.50	44.00

* See page 78 for data on Flat Link Chains

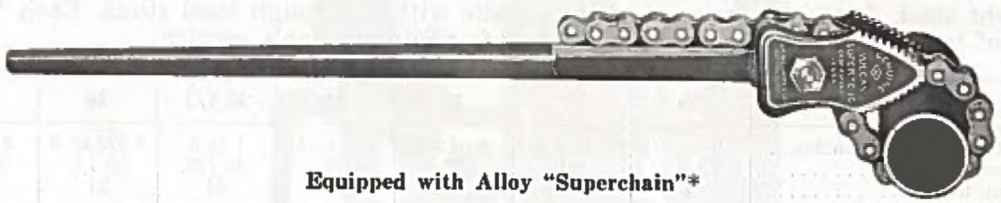
+ REGISTERED TRADE MARK

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WILLIAMS' +"VULCAN SUPERTONG" DROP-FORGED ALLOY AND HIGH-TENSILE STEEL

HEAT-TREATED

For Turning, or Holding 1/8 to 18 in. Pipe



Equipped with Alloy "Superchain"*

The design and structural features of "Supertongs" are identical with those of "Vulcan Tongs" described on the opposite page. "Supertongs," however, are forged from Alloy and High-tensile steel, and are heat-treated. They provide at least *50% greater strength* than regular "Vulcan" Tongs of corresponding size, with no increase in bulk or weight.

"Supertongs" are equipped with "Vulcan Superchains," a new Williams' chain of Alloy Steel—heat-treated and cadmium-plated—having greatly increased strength and durability; see page 78. Each *"Superchain"* is individually *"proof-tested"* in a standard tension machine to *two-thirds of its breaking strain* listed in table. Each chain, so tested, is stamped **O** on the drop-forged swinging link and to it is attached a leaden seal bearing our trade mark ⟨W⟩, thus absolutely establishing the safety-factor and reliability of every tong.

Finish:—Gray enamel; blue panel in Jaw, with bright faced edges. The "Superchains" are cadmium-plated.

Number	A10	A11	A12	A13	A13 1/2	A14	A15	A16
Capacity Size Pipe, inches	1/8 to 3/4	1/8 to 1 1/2	1/4 to 2 1/2	3/4 to 4	1 to 6	1 1/2 to 8	2 to 12	4 to 18
Extreme Length	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2	87
Weight, lbs.	2	5 3/4	10	17	24	31	52	137
Flat Link "Superchain"								
Length	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2	74 1/2
Breaking Strain, lbs.	5,800	10,800	15,600	20,000	22,800	25,000	35,000	64,000
LIST PRICE								
Complete	**$7.50**	**$10.50**	**$15.00**	**$21.00**	**$27.00**	**$33.00**	**$54.00**	**$120.00**
*Extra "Superchain"	2.50	3.50	5.50	8.50	11.50	14.50	24.00	62.00
Extra Jaws, pair	3.50	5.50	8.00	11.00	13.50	16.50	24.00	50.00
Extra Bolt and Nut, per set	.28	.36	.46	.60	.70	.90	1.30	2.50

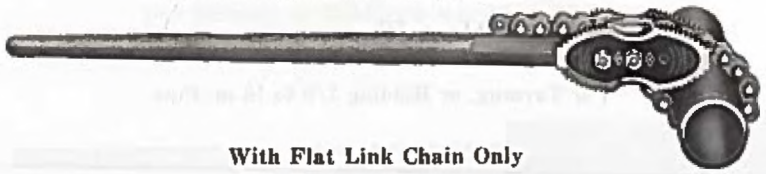
*** See page 78 for data on Flat Link Chains.**

+ REGISTERED TRADE MARK

IMPROVED +"VULCAN" CHAIN PIPE TONGS

With Double-Ended Reversible Jaws

For Turning, or Holding 1/8 to 12 in. Pipe



With Flat Link Chain Only

Improved "Vulcan" Tongs have double ended reversible jaws which may be quickly changed, end for end, providing double service life. These Tongs are wholly made of wrought steel. Jaws are fastened to the handle with two tough steel studs. Each *chain is proof-tested and certified assuring long, safe and dependable service.

Number	30	31	32	33	33 1/2	34	35
Capacity—Size Pipe, Inches	1/8 to 3/4	1/8 to 1 1/2	1/4 to 2 1/2	3/4 to 4	1 to 6	1 1/2 to 8	2 to 12
Extreme Length	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2
Weight, lbs.	2	5 3/4	10	17	24	31	52
Flat "Standard" Chain Length	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2
Breaking Strain, lbs.	3,600	6,700	9,800	12,500	14,300	15,700	21,800
LIST, Complete with Std. Chain	$5.00	$7.00	$10.00	$14.00	$18.00	$22.00	$36.00
*Extra Standard Chain	1.50	2.00	3.00	5.00	7.00	9.00	15.00
Extra Jaws, pair	2.00	3.50	5.50	8.00	9.50	11.00	15.00
Extra Nuts and Studs, per set	.40	.50	.70	.90	1.10	1.40	1.80

Improved "Vulcan" Tongs can be furnished with "Xtra-Strong" Flat Chain if specified, at small extra charge.

+"VULCAN BOLL-WEEVIL"

For Oil Fields Service



PATENTED

Reversible Action

Designed for flat pipe work and pipe line work, the "Vulcan Boll-Weevil" eliminates holding up of heavy tongs against pipe from below. Simply lay tongs on top of pipe and hook chain around it. Positive grip and ready release. The Jaws are reversible for double service life. Equipped with "Standard" *Chain.

+"BOLL-WEEVIL ZEPHYR"

Light Weight — Heat-Treated



PATENTED

Equipped with Alloy "Superchain"

Exactly the same design, structural and utility features as the regular "Vulcan Boll-Weevil" but stronger and lighter in weight, capacity for capacity. Forged from special high-tensile steel, heat-treated. Equipped with *"Superchains" cadmium-plated. Handle and panel in Jaws—gray enamel; Jaws—bright faced edges, blue backs.

Number	"BOLL-WEEVIL"				"ZEPHYR"		
	23	23 1/2	24	25	123 1/2	124	125
Capacity—Size Pipe, inches	3/4 to 4	1 to 6	1 1/2 to 8	2 to 12	3/4 to 6	1 to 8	1 1/2 to 12
Extreme Length	37	44 1/2	50 1/2	64	41	47	57 1/2
Weight, lbs.	19	28	41	65	20 3/4	30 1/4	44 3/4
Chain, Breaking Strain, lbs.	12,500	14,300	15,700	21,800	20,000	22,800	25,000
LIST, Complete with Standard Chain	$14.00	$18.00	$22.00	$36.00	$20.00	$26.00	$36.00
*Extra Standard Chain	5.00	7.00	9.00	15.00			
*Extra "Superchain"					10.50	14.00	19.00
Extra Jaws, pair	8.00	9.50	11.00	15.00	8.50	10.50	13.00
Flat "Xtra-Strong" Chain, Number	X23	X23 1/2	X24	X25			
Breaking Strain, lbs.	17,600	20,100	22,000	31,000			
LIST, *"Xtra-Strong" Chain, only	$ 5.50	$ 7.70	$ 9.90	$16.50			
Tong with "Xtra-Strong" Chain	14.50	18.70	22.90	37.50			

+ REGISTERED TRADE MARK

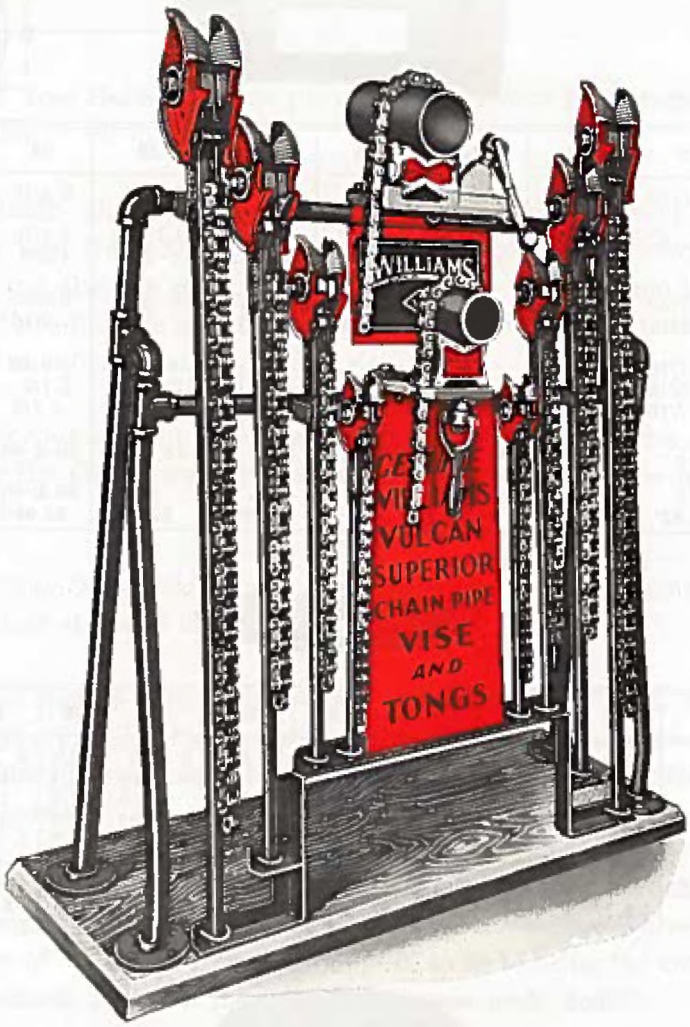
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*See page 78 for data on Flat Link Chains

DISPLAY RACK

FOR

WILLIAMS' ✦"VULCAN" CHAIN PIPE TOOLS



An attractive method of display and an efficient aid to salesmen in demonstrating Williams' "Vulcan" Chain Pipe Tools. It makes the usual dark-corner storage space unnecessary and increases the interest of both buyer and seller in this stock.

The rack is made of wrought iron pipe, painted black with metal panels enameled in orange, and occupies about 14 x 38" floor space—3 ft. high. It is loaned only to dealers for use with Williams' "Vulcan" Chain Pipe Tongs and Vises.

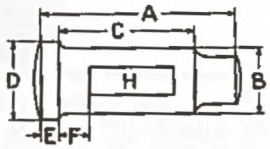
✦ REGISTERED TRADE MARK

WILLIAMS' ✦"VULCAN" TOOL POST FITTINGS

UNFINISHED

TOOL POSTS
Openings Punched Out





Number	5	10	20	23	28	30	40	50	60
Length, A	2 15/16	4 1/16	4 9/16	5	5 3/16	5 1/4	6 5/16	7 3/8	8 3/4
Body Diameter, B	1 1/32	1 1/4	1 5/8	1 7/16	1 9/16	1 13/16	2 1/16	2 1/4	2 31/32
Body Length, C	2	2 7/8	3 1/4	3 1/2	3 11/16	3 3/4	4 3/8	5	6
Base Diameter, D	1 7/32	1 5/8	2 1/8	1 7/8	2 1/16	2 5/16	2 5/8	2 15/16	3 5/8
Base Thickness, E	5/16	1/4	7/16	5/16	5/16	1/2	9/16	5/8	3/4
Base to Opening, F	7/16	1/2	13/16	5/8	5/8	15/16	1 3/16	1 3/8	1 1/2
Opening Size, H	1 5/16 x 7/16	1 15/16 x 19/32	1 7/8 x 11/16	2 1/2 x 21/32	2 11/16 x 11/16	2 1/8 x 3/4	2 1/2 x 7/8	2 7/8 x 15/16	3 9/16 x 1
For use with Wedge	5	10	15 & 18	15 & 18	15 & 18	18 & 20	30 & 40	60	
For use with Ring	5	10	11	14	18	20	30 & 40	60	
LIST PRICE	$.82	$1.05	$1.40	$1.65	$1.90	$2.10	$3.05	$3.95	$7.95

TOOL POST WEDGES



For Changing Angles of Lathe Tools

Number	5	10	11	15	18	20	30	40	60	65
Length	2 13/32	3	3 3/8	3 3/8	3 7/8	3 7/8	4 3/8	4 7/8	5 1/4	5 5/16
Width—Top	13/32	9/16	1/2	5/8	5/8	11/16	3/4	13/16	15/16	7/8
Width—Extreme	1/2	21/32	19/32	23/32	3/4	13/16	7/8	15/16	1 3/32	1 1/32
Extreme Thickness	11/32	31/64	25/64	7/16	15/32	17/32	1/2	21/32	3/4	29/32
Radius	3	2 7/8	4 5/8	4 5/8	4 1/2	4 3/4	5 1/2	5 3/4	6	5
For Use with Post	5	10	20	20	20 & 30	30	40	40	50	
For Use with Ring	5	10	11	11	11 & 20	20	30	40	60	
LIST PRICE	$.27	$.30	$.30	$.33	$.34	$.35	$.40	$.47	$.56	$.61

TOOL POST RINGS



For Changing Angles of Lathe Tools

Number	5	10	11	14	18	20	30	40	60
Diameter, Outside	2 1/4	2 15/16	3	3 3/16	3 7/16	3 1/2	3 1/2	4	4 1/2
Diameter, Hole	1 1/16	1 5/16	1 5/8	1 7/16	1 9/16	1 3/4	2	2	2 3/16
Thickness, Edge	3/8	7/16	7/16	5/8	11/16	9/16	3/4	3/4	3/4
Radius of Concave	3	2 7/8	4 5/8	4 5/8	4 1/2	4 3/4	5 1/2	5 3/4	6
For Use with Post	5	10	20	23	28	30	40	40	50
For Use with Wedge	5	10	11 & 15	18 & 20	18	18 & 20	30	40	60
LIST PRICE	$.33	$.47	$.52	$.75	$.94	$.82	$1.00	$1.15	$1.50

Weights, page F.

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✦ REGISTERED TRADE MARK

WILLIAMS'

DROP-FORGED TOOL-HOLDERS

"THE HOLDERS THAT HOLD"

The Williams' Tool Holder System provides tool holders for convenient, efficient and economical operation in all lathe work.

Holders, or shanks, all drop-forged from a strong, tough grade of carefully selected steel, are specially heat-treated and hardened. These processes develop maximum resistance to all wear and also the sturdy strength necessary to overcome the pushing thrust imposed upon the Cutters. The nose of the Holders is chamfered to permit convenient use in cramped quarters, where space is limited.

Cutter-holding channel is unusually accurate and long. It provides an absolutely true and rigid seat for the Cutter and assures a chatter-proof tool. No breaking of costly high speed steel bits.

Williams' Cutting-Off & Side-Tools provide unequalled convenience and economy—*one* Holder takes *both* styles of blade.

Each Williams' Boring-Tool holds securely many sizes of Bars, without requiring sleeves, or bushings. This is often a great convenience, since any size bar, within the capacity of the holder, can be inserted instantly without waiting to locate loose parts that have been lost, or mislaid.

Williams' Planing-Tools, because of their unique design, provide 24 different angles of cutter adjustment instead of the usual 5—a real advantage when working in close quarters. Reversal of the Holder in the tool post, so as to bring the cutting point behind the center of the shank, makes a most efficient "goose neck" tool.

Williams' Cutters are all made from High Speed Steel. Since those for Turning and Planing Tools are cut to the "diamond-point" form or bevel, they care for the most common requirements with a minimum of grinding. All Cutting-Off, Side and Threading Cutters are finished, ready for use.

Hardening Cutters. Only the most modern and efficient equipment is used in hardening Williams' Cutters. Variations in hardness, beyond our standardized close limits, are entirely eliminated and consistent high quality, with durable cutting edges, maintained.

WILLIAMS' CARBIDE TURNING-TOOL HOLDERS

With Straight and Offset Shanks

"THE HOLDERS THAT HOLD"



Straight Shank



Right Hand Offset Shank

Furnished with Wrench, but *without* Cutter

Left Hand Offset Shank



In these Tools, the Cutter is held parallel to the shank. Consequently, Cutters can be so ground as to provide maximum support for the cutting edge. This feature, plus the extremely rigid Holder, is the recognized basis for the best performance of cemented Carbide Cutters.

Holders are broached for either square or flat standard Carbide Cutters, but are supplied WITHOUT CUTTERS. These may be obtained, on short notice, directly from the manufacturers of cemented carbide "tips." Inquiries sent us for Cutters with order for Holders, or separately, will be forwarded to leading manufacturers of cemented carbides, thereby assuring customers of direct, expert assistance from carbide cutter specialists.

Carbide Cutters, as supplied by their manufacturers, are available in many grades and standardized shapes of tips. Always specify material to be cut, nature of operation, form of cutter desired, its size and whether square, or flat. Flat cutters are recommended for general work.

Number			Holder, Size	For Cutter		LIST PRICE Holder Without Cutter	Number		
Straight Shank	Offset Shank			Sq., Size	Flat, Size		Straight Shank	Offset Shank	
	Right Hand	Left Hand						Right Hand	Left Hand
FOR SQUARE CUTTERS									
T-0-S	T-0-R	T-0-L	3/8 x 15/16 x 6	1/4		$ 3.20	T-0-S	T-0-R	T-0-L
T-1-S	T-1-R	T-1-L	1/2 x 1 1/4 x 7	5/16		3.60	T-1-S	T-1-R	T-1-L
T-2-S	T-2-R	T-2-L	5/8 x 1 1/2 x 8	3/8		4.50	T-2-S	T-2-R	T-2-L
T-3-S	T-3-R	T-3-L	3/4 x 1 3/4 x 9	7/16		6.00	T-3-S	T-3-R	T-3-L
T-4-S	T-4-R	T-4-L	7/8 x 1 7/8 x 10	1/2		7.60	T-4-S	T-4-R	T-4-L
T-5-S	T-5-R	T-5-L	1 x 2 1/8 x 12	5/8		10.80	T-5-S	T-5-R	T-5-L
***FOR FLAT CUTTERS**									
FT-1-S	FT-1-R	FT-1-L	1/2 x 1 1/4 x 7		5/16 x 7/16	$ 4.40	FT-1-S	FT-1-R	FT-1-L
FT-2-S	FT-2-R	FT-2-L	5/8 x 1 1/2 x 8		3/8 x 1/2	5.40	FT-2-S	FT-2-R	FT-2-L
FT-3-S	FT-3-R	FT-3-L	3/4 x 1 3/4 x 9		7/16 x 9/16	7.20	FT-3-S	FT-3-R	FT-3-L
FT-4-S	FT-4-R	FT-4-L	7/8 x 1 7/8 x 10		1/2 x 3/4	9.20	FT-4-S	FT-4-R	FT-4-L
FT-5-S	FT-5-R	FT-5-L	1 x 2 1/8 x 12		5/8 x 7/8	12.90	FT-5-S	FT-5-R	FT-5-L

Weights, page L.

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***Holders for Flat Cutters to be Discontinued when stock is exhausted**

WILLIAMS' TURNING-TOOL HOLDERS

With Straight and Offset Shanks

"THE HOLDERS THAT HOLD"



Straight Shank



Right Hand Offset Shank

Furnished With Cutter and Wrench

Left Hand Offset Shank



For general description see page 85.

Holders have nose chamfered and are specially heat-treated and hardened.

The cutter-holding channel is unusually accurate and long. It provides an absolutely true and rigid seat for the cutter and assures a chatter-proof tool. No breaking of high speed steel bits.

The Set Screws, made of a fine grade of Alloy Steel, are accurately machined and carefully heat-treated and hardened. They are unusually tough and strong and provide the maximum efficiency in cutter fastening.

The "diamond-point" form in which the High Speed Cutters are furnished requires the minimum of grinding.

Number			Holder, Size	Cutter Size, Square	LIST PRICE	
Straight Shank	Offset Shank				Cutters Only, High Speed Steel	Complete Tool, with High Speed Cutter
	Right Hand	Left Hand				
000-S	000-R	**000-L**	5/16 x 1/2 x 4	3/16	$.15	$ 2.70
00-S	00-R	**00-L**	5/16 x 3/4 x 4 1/2	3/16	.15	2.70
0-S	0-R	**0-L**	3/8 x 7/8 x 5	1/4	.20	2.85
1-S	1-R	**1-L**	1/2 x 1 1/8 x 6	5/16	.35	3.25
2-S	2-R	**2-L**	5/8 x 1 3/8 x 7	3/8	.55	4.00
3-S	3-R	**3-L**	3/4 x 1 5/8 x 8	7/16	.90	5.40
4-S	4-R	**4-L**	7/8 x 1 3/4 x 9	1/2	1.30	6.90
5-S	5-R	**5-L**	1 x 2 x 11	5/8	2.35	9.75
6-S	6-R	**6-L**	1 1/4 x 2 1/4 x 13	3/4	3.85	13.50

Weights, page L.

WILLIAMS' DROP-HEAD TURNING-TOOL HOLDERS

With Straight and Offset Shanks

"THE HOLDERS THAT HOLD"



Straight Shank



Right Hand Offset Shank

Furnished with either type of Cam, Cutter and Wrench

Left Hand Offset Shank



For general description, see page 85.

Designed for use on lathes with clamp-tool rests and low centers, and excellently adapted to shaper and planer work.

The cutter-holding channel is unusually accurate. It provides an absolutely true and rigid seat for the cutter and assures a chatter-proof tool. No breaking of high speed steel bits.

The Cam-fastening is always rapid and positive—the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post, and imposes no obstruction to cutting facilities. Either Hex Head or Headless Cam is furnished; both types are interchangeable.

The "diamond-point" form in which the High Speed Cutters are furnished requires the minimum of grinding.

Hex Head Cam will be furnished, unless otherwise specified.

Number			Holder, Size	Cutter Size, Square	Height from Bottom of Shank to Cutter Point	LIST PRICE		
Straight Shank	Offset Shank					Extra Interchangeable Cams, Each	Cutters Only, High Speed Steel	Complete Tool, with High Speed Cutter
	Right Hand	Left Hand						
0200-S	0200-R	**0200-L**	7/16 x 9/16 x 6	3/16	9/16	$.90	$.15	$2.70
200-S	200-R	**200-L**	9/16 x 11/16 x 6 7/8	1/4	11/16	.99	.20	2.85
201-S	201-R	**201-L**	3/4 x 7/8 x 7 7/8	5/16	13/16	1.10	.35	3.25
202-S	202-R	**202-L**	7/8 x 1 x 8 7/8	3/8	15/16	1.22	.55	4.00
204-S	204-R	**204-L**	1 1/8 x 1 1/4 x 11	1/2	1 3/16	1.50	1.30	6.90

Weights, page L.

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WILLIAMS' THREADING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"



LOCKABLE-SPRING HEAD PATTERN
Furnished with
Finished Cutter and Wrench

FORMED-CUTTER PATTERN
Furnished with
Finished Cutter and Wrench



For General Description, see page 85

LOCKABLE-SPRING PATTERN

A highly perfected tool for fine and coarse threading, or other Lathe work. The Nut for the Lockable-Spring Head provides for the rigid backing required for heavy cuts; when it is loosened, the Holder becomes a spring-tool for finishing work. It is equally efficient as a Turning-tool. The Cam-fastening is always rapid and positive—the greater the pressure, the tighter the lock.

The cutter, made from High Speed steel, is finished. Each end is ground, the "V" point forming either an angle of 60° for U. S., or 55° for Whitworth Std. threads.

FORMED-CUTTER PATTERN

Williams' Threading-Tools with FORMED CUTTER assure threads that fit perfectly, since in re-sharpening the Cutter, it is necessary to grind its top edge only. Therefore, the point will always retain proper form and angle as originally supplied.

The High Speed Cutter is ground to an included angle of 60° and is backed off for proper clearance. Its rear, flat edge is eccentrically formed; the hardened stop screw, bearing against it, provides positive and accurate adjustment.

No.	Holder, Size	Cutter, Size Square	LIST PRICE		No.
			Extra Finished Cutter, High Speed	Complete with High Speed Cutter	
	LOCKABLE-SPRING PATTERN				
S-50	3/8 x 7/8 x 5 1/4	1/4	$.45	$4.15	S-50
S-51	1/2 x 1 1/8 x 6	5/16	.55	5.00	S-51
S-52	5/8 x 1 3/8 x 7	3/8	.70	6.40	S-52
	FORMED-CUTTER PATTERN				
C-050	5/16 x 3/4 x 5	Formed	$2.65	$4.15	C-050
C-50	3/8 x 7/8 x 5	Formed	2.65	4.15	C-50
C-51	1/2 x 1 1/8 x 5 3/4	Formed	3.15	5.00	C-51
C-52	5/8 x 1 3/8 x 7	Formed	4.15	6.40	C-52

Weights, page L.

WILLIAMS' LIGHT BORING-TOOL HOLDERS

For Small, Light Boring, Turning, Etc.

For Many Sizes of Bars



Furnished with 2 Finished Bars, 1 Square Cutter and Wrench

This Holder is very handy and economical for tool room use and for all small work — not only in boring small diameters, threading, etc., but also in turning.

Boring. Each tool will hold a number of sizes of Bars; two, varying 1/8" in diameter, are supplied with each Holder. The solid Bars are High Speed Steel, carefully hardened and ground, ready for use.

Turning. The Holder, will offset shank, is reversible for right and left hand work. A hardened, High Speed Steel square Cutter with ends beveled to a "diamond point" for easy grinding to desired form, is supplied with each tool.

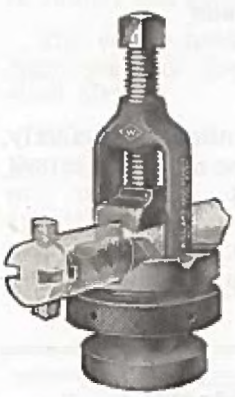
No.	Holder, Size Shank	With Each Holder: 2 Bars High Speed Steel, Diameter	With Each Holder: 1 High Speed Square Cutter	LIST PRICE: Square Cutter Only	LIST PRICE: Complete Holder, Bars and Cutter	No.
15	3/8 x 3/4 x 5	1/8 & 1/4	1/4	$.20	$4.15	15
16	1/2 x 1 x 5 3/4	3/16 & 5/16	5/16	.35	5.25	16
17	5/8 x 1 1/4 x 6 3/4	1/4 & 3/8	3/8	.55	6.75	17

EXTRA BORING BARS

Size	1/8 x 4	3/16 x 4 1/2	1/4 x 5	5/16 x 6	3/8 x 7	7/16 x 8
For Holders	15 & 16	15 to 17	15 to 17	15 to 17	16 & 17	17
LIST PRICE, Each	$.30	$.40	$.50	$.60	$.80	$1.10

ADJUSTABLE BORING-TOOL POSTS

For Many Sizes of Bars



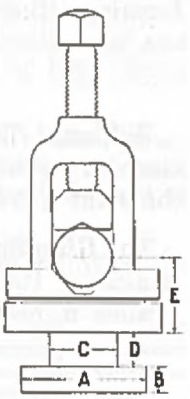
Furnished with either Sleeve or Plain Bar, 1 each 45° and 90° Cutter and 2 Wrenches

Each Post accommodates a wide range of Bars; commercial sizes of bar steel are adaptable for either Bars or Cutters without machining.

The height of the Bar is easily and quickly adjusted—a turn of the Knurled Ring will raise or lower the base on which the Bar rests; tightening the Set Screw in the head of the Post then locks the whole device instantly, giving an extremely rigid tool.

If Post is desired *without* the Bar, deduct price shown on page 91 for standard size Bar.

Standard size Sleeve Bar will be furnished, unless otherwise specified.



Number	2	3	4	5
Post—Length over all, without Screw	6 5/8	7 5/8	9 1/8	11 1/8
†"T" Slot Flange:				
A Diameter	3	3 1/2	4 1/4	5
B Thickness	5/8	3/4	7/8	1 1/16
†"T" Slot Neck:				
C Diameter	1 5/8	1 3/4	2	2 1/4
D Length	3/4	13/16	1	1 1/4
E Center Height	1 13/16	1 7/8	2 3/8	2 3/4
Post Capacity for Bars—Size	1/2 to 1 5/16	1/2 to 1 1/2	5/8 to 1 13/16	3/4 to 2 1/4
Standard Bar—Size	1 5/16	1 1/2	1 13/16	2 1/4
LIST PRICE—Complete Post:				
With Sleeve Bar, High Speed Cutters	$27.00	$37.50	$60.00	$90.00
With Plain Bar, High Speed Cutters	25.50	35.75	58.00	86.50

† The "T" Slot Flange and Neck are furnished large to allow for fitting to individual machines. For special finishing to specified dimensions, an extra charge of $2.00 net, each Post will be made.

Weights, page L.

Bar and Cutter details on page 91.

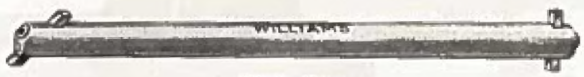
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WILLIAMS' BORING-TOOL HOLDERS

Each Takes Many Sizes of Bars



Sleeve Bar



Plain Bar

Furnished with either Sleeve or Plain Bar, 1 each 45° and 90° Cutter and 2 Wrenches

With this Holder, encumbering sleeves or bushings are unnecessary for Bars of various sizes; *One* Holder takes *many* Bars. Commercial forms of bar steel are adaptable for either Bars or Cutters without machining.

The Sleeve-bar fastening provides for the rapid adjustment of either straight or angular Cutters without the use of extra parts; it has greater strength than others of the same general design.

The Plain Bar provides for use with either Straight or Angular Cutters in the simplest manner possible and is furnished with Headless Set Screws.

Standard size Sleeve Bar will be furnished, unless otherwise specified.

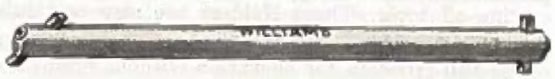
No.	Holder, Size	Holder Capacity for Bars, Size Diameter	Standard Bar, Size Diameter	LIST PRICE Complete Holder		No.
				With Plain Bar, High Speed Cutters	With Sleeve Bar, High Speed Cutters	
080	5/16 x 3/4	3/16 to 1/2	1/2	$4.30	$ 4.90	080
80	3/8 x 7/8	1/4 to 5/8	5/8	4.30	4.90	80
81	1/2 x 1 1/8	1/4 to 3/4	3/4	5.00	5.80	81
82	5/8 x 1 3/8	3/8 to 15/16	15/16	6.50	7.65	82
83	3/4 x 1 5/8	1/2 to 1 1/8	1 1/8	9.60	10.85	83

BORING-BARS and CUTTERS

FOR BORING-TOOL HOLDERS and ADJUSTABLE BORING-TOOL POSTS



Sleeve Bar



Plain Bar

Furnished with Two Cutters and Wrench

Boring-Bars Approximate Size		For Use With		Cutters		LIST PRICE		
							Complete Bar	
Sleeve	Plain	Holders No.	Posts No.	Size Square and Length	For Use at Angles of	Cutters Only, High Speed	Plain, with High Speed Cutters	Sleeve, with High Speed Cutters
1/2 x 7 5/8	1/2 x 8 1/8	080-83	2-3	3/16 x 1	90°	$.10	$ 2.40	$ 3.00
				3/16 x 1 1/2	45°	.12		
5/8 x 9 1/8	5/8 x 10 1/8	80-83	2-4	3/16 x 1	90°	.10	2.40	3.00
				3/16 x 1 1/2	45°	.12		
3/4 x 11	3/4 x 12 1/8	81-83	2-5	1/4 x 1 1/4	90°	.15	2.95	3.75
				1/4 x 2	45°	.19		
15/16 x 13 1/4	15/16 x 14 1/8	82-83	2-5	5/16 x 1 1/2	90°	.24	4.25	5.40
				5/16 x 2 1/2	45°	.32		
1 1/8 x 16	1 1/8 x 16 3/4	83	2-5	3/8 x 1 7/8	90°	.35	6.25	7.50
				3/8 x 3	45°	.50		
1 5/16 x 19	1 5/16 x 20		2-5	3/8 x 2 1/8	90°	.40	9.00	10.50
				3/8 x 3 1/4	45°	.55		
1 1/2 x 23 1/4	1 1/2 x 23 1/2		3-5	7/16 x 2 1/4	90°	.60	11.75	13.50
				7/16 x 3 3/8	45°	.85		
1 13/16 x 27 1/4	1 13/16 x 28		4-5	1/2 x 2 5/8	90°	.90	17.50	19.50
				1/2 x 4	45°	1.30		
2 1/4 x 33	2 1/4 x 34		5	5/8 x 3 1/8	90°	1.70	31.00	34.50
				5/8 x 4 3/4	45°	2.35		

Weights, page L.

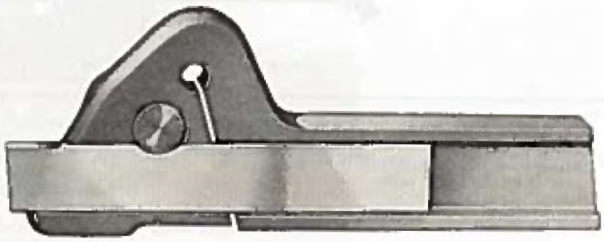
Light Boring Bars and Posts on previous page.

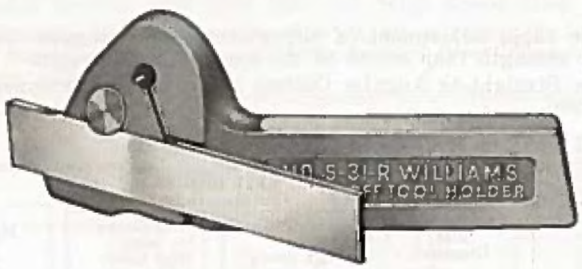
WILLIAMS' SPRING CUTTING-OFF TOOL HOLDERS

With Straight and Right Hand Offset Shanks

"THE HOLDERS THAT HOLD"

Straight Shank





Right Hand Offset Shank

Furnished with Finished Cutter and Wrench

For General Description, see page 85.

These Spring Tools make comparatively simple all lathe cutting-off work—long thought the hardest of lathe operations. Due to the "goose neck" form of the Holder, the Cutter Blade is relieved of excess pressure; no chattering, no "climbing" of the work on the tool—the real cause of nearly all breakage of cutting-off tools. These Holders are also particularly efficient with automatic feed.

The Cam-fastening is always rapid and positive—the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post.

Cutter Blades are High Speed Steel, hardened and ground ready for use. They are interchangeable in Holders of corresponding size on page 93-A, as explained in following paragraphs.

NOTE: For the convenience of users, the width of Cutter Blades and slot in the Holders for same is being altered. The new Cut-off Blades are interchangeable in other standard Holders.

This change is now effective on Holders with piece number carrying the prefix "N" (New). All other sizes will be altered similarly as the present stock of Holders is exhausted, but Extra Blades of former size to fit old Holders now in use will be continued.

Always be sure to specify the Holder number when ordering Extra Blades. For instance, No. S-21-R for Blade to fit old Holder; No. NS-21-R for Blade to fit new Holder.

Straight Shank Holders will be furnished, unless otherwise specified.

Number		Holder, Size	Cutter Blades, High Speed Steel, Finished Size		LIST PRICE		Number	
Straight Shank	Offset Shank, Right Hand		OLD for Original Williams' Holders Only	*NEW Interchangeable in Other Standard Holders	Extra Blade, Finished, High Speed Steel	Complete Holder with Blade, High Speed Steel	Straight Shank	Offset Shank, Right Hand
.....	NS-30-RA	3/8 x 13/16		3/32 x .595	$.65	$4.50		NS-30-RA
NS-20	NS-30-R	3/8 x 31/32	3/32 x 5/8	3/32 x .595	.65	4.50	NS-20	NS-30-R
NS-21	NS-31-R	1/2 x 1 3/16	1/8 x 3/4	1/8 x .735	.90	5.40	NS-21	NS-31-R
NS-22	NS-32-R	5/8 x 1 3/8	1/8 x 7/8	1/8 x .870	1.30	6.75	NS-22	NS-32-R
NS-23	NS-33-R	3/4 x 1 5/8	3/16 x 1	3/16 x .940	2.15	9.00	NS-23	NS-33-R

*New Cutter Blades will not fit old Holders, nor old Blades, new Holders.

Weights, page L.

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WILLIAMS' CUTTING-OFF AND SIDE-TOOL HOLDERS

For Interchangeable Blades. Straight and Offset Shanks.

"THE HOLDERS THAT HOLD"

Right Hand Straight Shank



Left Hand Offset Shank



Furnished with Finished Cutter and Wrench



Right Hand Offset Shank

For General Description, see page 85.

One Holder takes both Cutting-off and Side Blades, providing unique convenience and economy.

The Cam-fastening is always rapid and positive—the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post.

The Cutter Blades are High Speed Steel, hardened and ground ready for use. They are interchangeable in Holders of corresponding size on page 92-A, as explained in following paragraphs.

NOTE: For the convenience of users, the width of Cutter Blades and slot in the Holders for same is being altered. The new Cut-off Blades (not Side) are interchangeable in other standard Holders.

This change is now effective on Holders with piece number carrying the prefix "N" (New). All other sizes will be altered similarly as the present stock of Holders is exhausted, but Extra Blades of former size to fit old Holders now in use will be continued.

Always be sure to specify the Holder number when ordering Extra Blades. For instance, No. 20-R for Blade to fit old Holder; No. N-20-R for Blade to fit new Holder.

Cutting-off Blade will be furnished, unless otherwise specified.

Number			Holder, Size	Cutter Blades, High Speed Steel, Finished Size				LIST PRICE			
				Cutting-Off Blade		Side Blade		Extra Blade, Finished, High Speed Steel		Complete Holder With Blade, High Speed Steel	
Straight Shank Right Hand	Offset Shank Right Hand	Offset Shank Left Hand		OLD for Original Williams' Holders Only	*NEW Interchangeable in Other Standard Holders	OLD for Original Williams' Holders Only	*NEW for New-Style Williams' Holders "N" Series	Cut-Off	Side	Cut-Off	Side
N-020-R	N-030-R	N-030-L	5/16 x 13/16	5/64 x 1/2	5/64 x .475	1/8 x 1/2	1/8 x .475	$.60	$.60	$2.85	$2.85
N-20-R	N-30-R	N-30-L	3/8 x 31/32	3/32 x 5/8	3/32 x .595	5/32 x 5/8	5/32 x .595	.65	.90	3.00	3.40
N-21-R	N-31-R	N-31-L	1/2 x 1- 3/16	1/8 x 3/4	1/8 x .735	3/16 x 3/4	3/16 x .735	.90	1.40	3.60	4.35
N-22-R	N-32-R	N-32-L	5/8 x 1- 3/8	1/8 x 7/8	1/8 x .870	1/4 x 7/8	1/4 x .870	1.30	2.30	4.50	6.00
N-23-R	N-33-R	33-L	3/4 x 1- 5/8	3/16 x 1	3/16 x .040	5/16 x 1	5/16 x .040	2.15	3.40	6.00	7.85
N-24-R	N-34-R	34-L	7/8 x 1- 3/4	3/16 x 1-1/8	3/16 x 1.100	3/8 x 1-1/8	3/8 x 1.100	2.90	5.00	7.50	10.65
N-25-R	N-35-R	35-L	7/8 x 1- 3/4	1/4 x 1-1/8	1/4 x 1.100			4.00		8.60	

*New Cutter Blades will not fit old Holders, nor old Blades, new Holders.

Weights, page L.

WILLIAMS' KNURLING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"



Nos. 00-K to 2-K with Self-centering Head and One Pair of Knurls

Nos. 11-K, 12-K with Revolving Head and Three Pairs of Knurls



For General Description, see page 85

Williams' Knurling Tools are furnished in two designs:—

Nos. 00-K to 2-K, with sturdy, self-centering heads, are each fitted with ONE pair of Knurls for fine, medium, or coarse work—see illustration on opposite page. Unless otherwise specified, "Diamond" Pattern, Medium Knurls will be supplied.

Nos. 11-K and 12-K carry THREE pairs of Knurls for fine, medium and coarse work—see illustration on following page. These are fitted in a revolving head and can be used as desired, without loss of time in changing from one grade of knurling to another.

The Pins are of Tool Steel, carefully tempered.

The Knurls are fully described on next page.

No.	Holder, Size	Knurls, Size			Weight Each, Lbs.	LIST PRICE		No.
		Diam.	Face	Hole		Extra Knurls, Pair	Complete Tool	
SELF-CENTERING HEAD—ONE PAIR OF KNURLS								
00-K	5/16 x 3/4 x 5	5/8	3/16	*7/32	.55	$1.00	$5.65	**00-K**
0-K	3/8 x 7/8 x 5 1/2	5/8	3/16	*7/32	.65	1.00	6.00	**0-K**
1-K	1/2 x 1 1/8 x 6 5/8	3/4	1/4	1/4	1.90	1.15	6.75	**1-K**
2-K	5/8 x 1 3/8 x 7 1/2	3/4	1/4	1/4	2.25	1.15	8.00	**2-K**
REVOLVING HEAD—THREE PAIRS OF KNURLS								
11-K	1/2 x 1 1/8 x 6 5/8	3/4	1/4	1/4	1.90	1.15	9.00	**11-K**
12-K	5/8 x 1 3/8 x 6 5/8	3/4	1/4	1/4	2.25	1.15	10.50	**12-K**

*Hole, old diameter 1/4 inch.

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KNURLS FOR WILLIAMS' KNURLING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"

DIAMOND PATTERN **STRAIGHT-LINE PATTERN**



Coarse 14 Pitch **Medium 21 Pitch** **Fine 33 Pitch** **Coarse 14 Pitch** **Medium 21 Pitch** **Fine 33 Pitch**

Note: "Pitch" means number of teeth per linear inch.



Illustrations above show actual size of Knurling

Williams' Knurls are made to close limits in all respects and, being accurately cut, they assure sharp and perfect teeth in the knurled product. The hole is concentric with and parallel to the cutting face, insuring uniform, clean cut results. All Knurls are made from high grade tool steel and are specially hardened and tempered.

Furnished in pairs to fit standard makes of Knurling Tools and supplied in two Patterns—"Diamond" and "Straight-Line." Three different pitches in each Pattern—Coarse, 14 pitch; Medium, 21 pitch; Fine, 33 pitch; all as illustrated above. When ordering, always specify Pattern and pitch desired.

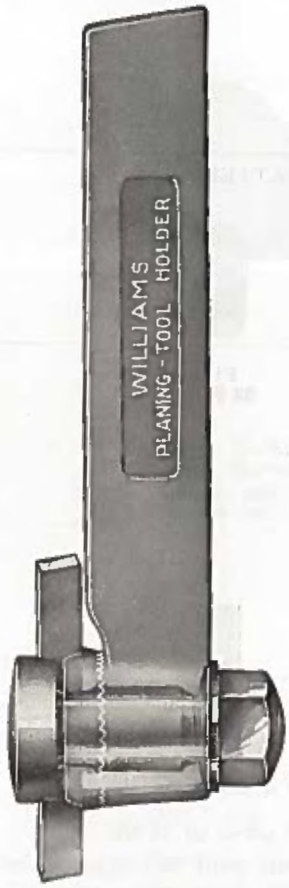
"Diamond" Pattern, Medium (21 pitch) will be furnished, unless otherwise specified.

For Knurling Tool No.	Knurls, Size				LIST PRICE Per Pair	For Knurling Tool No.
	Diameter	Thickness	Face	Hole		
00-K	5/8	5/16	3/16	*7/32	$1.00	00-K
0-K	5/8	5/16	3/16	*7/32	1.00	0-K
1-K	3/4	3/8	1/4	1/4	1.15	1-K
2-K	3/4	3/8	1/4	1/4	1.15	2-K
11-K	3/4	3/8	1/4	1/4	1.15	11-K
12-K	3/4	3/8	1/4	1/4	1.15	12-K

*Hole, old diameter 1/4 inch.

WILLIAMS' PLANING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"





The substantial Bolt-fastening and serrated Adjustment Ring



This construction affords most ready release of Cutter for easy adjustment.

The serrations in Holder provide maximum number of cutter adjustments.

Furnished with Cutter and Wrench

For General Description, see page 85.

A rugged, substantial and efficient tool on either Lathe or Planer. Because of its numerous angles of adjustment it also makes an excellent Offset Turning Tool.

The construction assures perfect seat and holding qualities for the Cutters; the convex face of Clamp Nut provides uniform locking pressure for Cutters of either square or rectangular form; the numerous serrations in Holder provide for quick, fine and maximum number of Cutter adjustments unequaled in other designs.

The serrated washer, or Adjustment Ring, which sustains the fastening and working strains, is hardened and tempered. Should it wear in prolonged service, a new Ring *only* is required—not a complete Holder.

No.	Holder, Size	Cutter Size	LIST PRICE			No.
			Extra Adjustment Ring	Cutter Only, High Speed Steel	Complete Holder, High Speed Cutter	
91	1/2 x 1 x 7	1/4 x 3/8	$.60	$.35	$ 4.65	91
92	5/8 x 1 1/4 x 8 1/2	5/16 x 7/16	.68	.55	6.00	92
93	3/4 x 1 1/2 x 10 1/4	3/8 x 1/2	.83	.80	7.85	93
94	1 x 1 3/4 x 13 1/4	1/2 x 3/4	1.05	1.95	12.40	94
95	1 3/8 x 2 x 16 1/2	5/8 x 7/8	1.50	3.35	21.75	95
96	1 3/4 x 2 3/8 x 19	3/4 x 1	2.25	5.00	39.00	96
97	2 1/8 x 2 3/4 x 22	7/8 x 1 1/8	3.38	8.20	57.00	97

Weights, page L.

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WILLIAMS' LATHE TOOL SETS

"THE HOLDERS THAT HOLD"

High Speed Steel Cutters

Convenient—Efficient—Economical—Superior

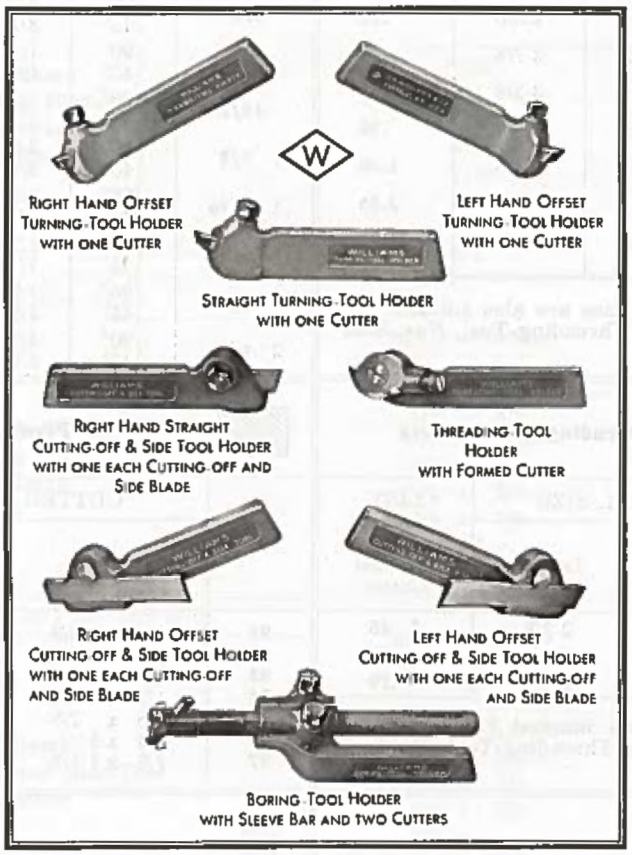
Williams' Holders save all lost time of men and machines waiting for tools. Nearly all tool-grinding time. All blacksmith work. Practically all loss of costly high speed steel.

Six "always ready" Sets illustrated below, provide for complete Lathe service—Turning, Boring, Threading, Cutting-Off and Side work—in a minimum number of tools, unequalled elsewhere—High Speed Cutters and Finished Wrenches are provided throughout.

Williams' Holders are made of special steel, heat-treated and hardened. No scoring, burring or breaking down by tool-post screw. Beveled nose permits working in close quarters.

ONE Williams' Holder takes BOTH cutting-off and side blades. A tool that performs both classes of work by the mere substitution of suitable cutters, tells its own story of economy.

Each Williams' Boring Tool takes SIX or more sizes of Bars WITHOUT using bushings. ONE tool holds MANY Bars. Two styles of Bars—"Sleeve" as illustrated and "Plain" at lower price.



Williams' Turning Tools have Large Alloy Steel Screw—heat-treated, unbreakable. Their accurately broached hole provides rigid seat for cutter—no chatter, no breakage.

Williams' Threading Tools Nos. C-50 and C-51 with Formed Cutter assure threads that fit perfectly, since in resharpening the Cutter, it is necessary to grind its top edge only. The point will always retain the proper form and angle.

Williams' Sleeve Boring-Bar fastening provides for the rapid adjustment of either straight or angular cutters without use of extra parts. It is stronger than others of same general design.

"Always ready" sets of Williams' Tool Holders, with a minimum number of tools, provide for greatest economy and service in lathe work.

WILLIAMS' TOOL HOLDERS IN SETS												
Set No.	For Lathes of Approx. *Swing Inches	Size of Holder Shank	Turning Tools			Cutting-off and Side Tools			Threading Tool No.	Boring Tool No.	Quantity of Tools in Set	LIST PRICE Complete Sets
			Straight Shank No.	Offset Shank		Straight Shank No.	Offset Shank					
				R. H. No.	L. H. No.		R. H. No.	L. H. No.				
00	7 to 10	5/16 x 3/4	00-S	00-R	00-L	N-020-R	N-030-R	N-030-L	—	080	7	$23.35
0	10 to 12	3/8 x 7/8	0-S	0-R	0-L	N-20-R	N-30-R	N-30-L	C-50	80	8	29.30
1	14 to 16	1/2 x 1-1/8	1-S	1-R	1-L	N-21-R	N-31-R	N-31-L	C-51	81	8	35.55
2	16 to 18	5/8 x 1-3/8	2-S	2-R	2-L	N-22-R	N-32-R	N-32-L	—	82	7	40.00
3	18 to 20	3/4 x 1-5/8	3-S	3-R	3-L	N-23-R	N-33-R	33-L	—	83	7	55.25
4	24 to 36	7/8 x 1-3/4	4-S	4-R	4-L	N-24-R	N-34-R	34-L	—	—	6	58.20

* Be careful to measure the opening in tool-post before ordering Sets. Due to a considerable variation in the proportions of lathes as furnished by different manufacturers, it is impossible to state definitely the "swing" of lathe best adapted to a given size Tool Holder.

WILLIAMS' HIGH SPEED STEEL CUTTERS

FOR WILLIAMS' TOOL HOLDERS

Require minimum of grinding only for use in Holders. All Cutters are hardened.

For Turning-Tool Holders

No.	CUTTER, SIZE		LIST Each, High Speed
	Square	Length	
00 & 0200	3/16	1 7/8	$.15
0 & 200	†1/4	2 3/8	.20
1 & 201	†5/16	2 7/8	.35
2 & 202	†3/8	3 3/8	.55
3	7/16	3 3/4	.90
4 & 204	1/2	4 1/8	1.30
5	5/8	4 3/4	2.35
6	3/4	5 1/2	3.85

† Cutters of these sizes are also suitable for turning when used in Threading-Tool, Nos. S-50 to S-52.

For Williams' Boring Bars

Bar Diam.	For Use at Angle of	CUTTER, SIZE		LIST Each, High Speed
		Square	Length	
1/2	90°	3/16	1	$.10
	45°	3/16	1 1/2	.12
5/8	90°	3/16	1	.10
	45°	3/16	1 1/2	.12
3/4	90°	1/4	1 1/4	.15
	45°	1/4	2	.19
15/16	90°	5/16	1 1/2	.24
	45°	5/16	2 1/2	.32
1 1/8	90°	3/8	1 7/8	.35
	45°	3/8	3	.50
1 5/16	90°	3/8	2 1/8	.40
	45°	3/8	3 1/4	.55
1 1/2	90°	7/16	2 1/4	.60
	45°	7/16	3 3/8	.85
1 13/16	90°	1/2	2 5/8	.90
	45°	1/2	4	1.30
2 1/4	90°	5/8	3 1/8	1.70
	45°	5/8	4 3/4	2.35

For Threading-Tool Holders

No.	CUTTER, SIZE		LIST Each, High Speed Finished Cutter
	Square	Length	
S-50	1/4	2 3/8	$.45
S-51	5/16	2 7/8	.55
S-52	3/8	3 3/8	.70

Turning-Tool Cutters marked † are suitable for turning work in Threading-Tool Holders. See table above.

For Planing-Tool Holders

No.	CUTTER, SIZE		LIST Each, High Speed
	Flat	Length	
91	1/4 x 3/8	2 1/2	$.35
92	5/16 x 7/16	3	.55
93	3/8 x 1/2	3 1/2	.80
94	1/2 x 3/4	4 1/4	1.95
95	5/8 x 7/8	5	3.35
96	3/4 x 1	6	5.00
97	7/8 x 1 1/8	7	8.20

Bevel For Cutting-Off Tool Holders

OLD Cutter Blade Finished		*NEW Cutter Blade Finished		LIST Each, High Speed
No.	Size	No.	Size	
020-030	5/64 x 1/2	N-020-N-030	5/64 x .475	$.60
20- 30	3/32 x 5/8	N20- N30	3/32 x .595	.65
21- 31	1/8 x 3/4	N21- N31	1/8 x .735	.90
22- 32	1/8 x 7/8	N22- N32	1/8 x .870	1.30
23- 33	3/16 x 1	N23- N33	3/16 x .940	2.15
24- 34	3/16 x 1-1/8	N24- N34	3/16 x 1.100	2.90
25- 35	1/4 x 1-1/8	N25- N35	1/4 x 1.100	4.00

Heavy Bevel For Side-Tool Holders

OLD Cutter Blade Finished		*NEW Cutter Blade Finished		LIST Each, High Speed
No.	Size	No.	Size	
020-030	1/8 x 1/2	N-020-N-030	1/8 x .475	$.60
20- 30	5/32 x 5/8	N20- N30	5/32 x .595	.90
21- 31	3/16 x 3/4	N21- N31	3/16 x .735	1.40
22- 32	1/4 x 7/8	N22- N32	1/4 x .870	2.30
23- 33	5/16 x 1	N23- N33	5/16 x .940	3.40
24- 34	3/8 x 1-1/8	N24- N34	3/8 x 1.100	5.00

* New Cutter Blades will not fit old Holders, nor old Blades, new Holders.

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DISCONTINUED FOR "THE DURATION"

WILLIAMS' HIGH SPEED STEEL

IN 3 FEET LENGTHS

Heat treatment instructions for Williams' High Speed Tool Holder Steel, listed below, will be furnished with each shipment of these bars.

Squares, for Use with	Size, Square	LIST PRICE 3 Feet Lengths Annealed High Speed
 Williams' Turning, Boring and Threading-Tool Holders	3/16	$ 1.40
	1/4	2.25
	5/16	3.40
	3/8	4.80
	7/16	6.30
	1/2	8.00
	5/8	12.50
	3/4	17.80

Flats, for Use with	Size, Flat Section	LIST PRICE 3 Feet Lengths Annealed High Speed
 Williams' Planing-Tool Holders	1/4 x 3/8	$ 3.50
	5/16 x 7/16	4.80
	3/8 x 1/2	6.60
	1/2 x 3/4	12.50
	5/8 x 7/8	17.50
	3/4 x 1	23.25
	7/8 x 1 1/8	30.70

Bevels, (Cutting-off) for Use with	†Size Section for Cutting-off Blade	LIST PRICE 3 Feet Lengths Annealed High Speed
 Williams' Cutting-off and Side-Tool Holders	5/64 x 1/2	$ 2.60
	3/32 x 5/8	2.70
	1/8 x 3/4	4.00
	1/8 x 7/8	4.35
	3/16 x 1	6.75
	3/16 x 1 1/8	7.50
	1/4 x 1 1/8	10.40

Heavy (Side Tool) Bevels, for Use with	†Size Section for Side Blade	LIST PRICE 3 Feet Lengths Annealed High Speed
 Williams' Cutting-off and Side-Tool Holders	1/8 x 1/2	$ 2.80
	5/32 x 5/8	3.70
	3/16 x 3/4	4.70
	1/4 x 7/8	7.00
	5/16 x 1	9.10
	3/8 x 1 1/8	12.45

† Bevel Steel for Cutting-off and Side Blades requires grinding on edges to fit Williams' Holders exactly. Finished sizes are given.

WILLIAMS' +"VULCAN" DROP-FORGED LATHE DOGS

With Bent Tail and One Screw



Safety Dog and Screw



Safety Screw and Wrench



Non-Safety Dog with Square Hd. Screw

*** Furnished with Interchangeable Screws, either Safety or Non-Safety**

Safety-for-the-operator and better balance when on the lathe are material improvements which have been attained in this design.

The Screws are of special steel, hardened and tempered, and are threaded U. S. Standard, except that those above 1 inch diameter have eight threads per inch. They are supplied in two types, Safety and Non-Safety, as illustrated. See description, opposite page.

(Continued on opposite page)

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS						LIST PRICE		No.
		Square Head			Safety					
		Size		List Price, Each	Size		List Price, Each	Safety Dog Wrench, Extra	Dog with Either Screw	
		Diam.	Length Under Head		Diam.	Extreme Length				
* 1	3/8	7/16	1	$.25	7/16	5/8	$.20	$.12	†$ 1.00	1
* 2	1/2	9/16	1 1/4	.30	9/16	13/16	.24	.14	† 1.10	2
* 3	3/4	5/8	1 5/8	.37	5/8	1 1/16	.30	.16	† 1.20	3
* 4	1	5/8	2	.40	5/8	1 1/4	.36	.16	† 1.40	4
* 5	1 1/4	3/4	2 1/4	.55	3/4	1 3/8	.42	.20	† 1.70	5
* 6	1 1/2	7/8	2 7/16	.75	7/8	1 11/16	.60	.24	† 2.00	6
* 7	1 3/4	7/8	2 7/16	.75	7/8	1 11/16	.60	.24	† 2.40	7
* 8	2	1	2 3/4	.95	1	1 7/8	.72	.30	† 2.80	8
* 9	2 1/2	1 1/8	3	1.15	1 1/8	2	.86	.38	† 3.60	9
*10	3	1 1/4	3 1/4	1.35	1 1/4	2 1/8	1.04	.48	† 4.60	10
11	3 1/2	7/8	3 1/2	.64	1 3/8	2 1/2	1.26	.60	† 6.00	11
12	4	7/8	3 3/4	.70	1 1/2	2 5/8	1.50	.74	† 9.00	12
*13	5	1 5/8	4 1/2	2.25	1 5/8	3 3/8	1.80	.90	† 16.00	13

† Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price stated in table.

+ REGISTERED TRADE MARK

Weights, pages L and M.

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WILLIAMS' +"VULCAN" DROP-FORGED HEAVY SERVICE LATHE DOGS

With Bent Tail and Two Screws



Non-Safety Dog with Square Hd. Screws



Safety Screw and Wrench

*** Furnished with Interchangeable Screws, either Safety or Non-Safety**



Safety Dog and Screws

(Continued from opposite page)

SCREWS. For the convenience of users and to permit jobbers to carry a reduced stock of Dogs, the size (diam. and thread) of Non-Safety Screws will be the same as for Safety Screws in corresponding Dogs. In other words, the two types of Screws can be interchanged. Consequently, if an assortment of Dogs complete with Safety Screws is carried, and also an assortment of extra Non-Safety Screws, the latter can be readily substituted at any time. This change is already effective in Dogs marked * in the tables. All other sizes of single and double-screw Dogs will be altered similarly as rapidly as present stock of Dogs with Non-Safety Screws is exhausted.

When ordering extra Screws, please state whether Safety or Non-Safety type is wanted; if latter, specify also diam. of screw.

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS						LIST PRICE		No.
		Square Head			Safety					
		Size		List Price, Each	Size		List Price, Each	Safety Dog Wrench, Extra	Dog with Either Screw	
		Diam.	Length Under Head		Diam.	Extreme Length				
112	4	7/8	3 3/4	$.70	1 1/2	2 5/8	$1.50	$.74	†$16.00	112
* 113	5	1 5/8	4 1/2	2.25	1 5/8	3 3/8	1.80	.90	† 24.00	113
* 114	6	1 5/8	4 1/2	2.25	1 5/8	3 3/8	1.80	.90	† 34.00	114

† Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price stated in table.

+ REGISTERED TRADE MARK

Weights, page M.

WILLIAMS' +"VULCAN"
DROP-FORGED LATHE DOGS
With Straight Tail and One Screw



Safety Dog and Screw



Safety Screw and Wrench

*** Furnished with Interchangeable Screws, either Safety or Non-Safety**



Non-Safety Dog with Square Hd. Screws

Safety-for-the-operator and better balance when on the lathe are material improvements which have been attained in this design.

The Screws are of special steel, hardened and tempered, and are threaded U. S. Standard, except that those above 1 inch diameter have eight threads per inch. They are supplied in two types, Safety and Non-Safety, as illustrated. See description, opposite page.

(Continued on opposite page)

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS						LIST PRICE		No.
		Square Head			Safety			Safety Dog Wrench, extra	Dog with either Screw	
		Size		List Price, each	Size		List Price, each			
		Diam.	Length Under Head		Diam.	Extreme Length				
* 21	3/8	7/16	1	$.25	7/16	5/8	$.20	$.12	†$ 1.00	21
* 22	1/2	9/16	1 1/4	.30	9/16	13/16	.24	.14	† 1.10	22
* 23	3/4	5/8	1 5/8	.37	5/8	1 1/16	.30	.16	† 1.20	23
* 24	1	5/8	2	.40	5/8	1 1/4	.36	.16	† 1.40	24
* 25	1 1/4	3/4	2 1/4	.55	3/4	1 3/8	.42	.20	† 1.70	25
* 26	1 1/2	7/8	2 7/16	.75	7/8	1 11/16	.60	.24	† 2.00	26
* 27	1 3/4	7/8	2 7/16	.75	7/8	1 11/16	.60	.24	† 2.40	27
* 28	2	1	2 3/4	.95	1	1 7/8	.72	.30	† 2.80	28
* 29	2 1/2	1 1/8	3	1.15	1 1/8	2	.86	.38	† 3.60	29
* 30	3	1 1/4	3 1/4	1.35	1 1/4	2 1/8	1.04	.48	† 4.60	30
31	3 1/2	7/8	3 1/2	.64	1 3/8	2 1/2	1.26	.60	† 6.00	31
32	4	7/8	3 3/4	.70	1 1/2	2 5/8	1.50	.74	† 9.00	32
* 33	5	1 5/8	4 1/2	2.25	1 5/8	3 3/8	1.80	.90	† 16.00	33

† Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price stated in table.

+ REGISTERED TRADE MARK

Weights, page M.

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WILLIAMS' ✦"VULCAN"
DROP-FORGED HEAVY SERVICE LATHE DOGS
With Straight Tail and Two Screws



Non-Safety Dog with Square Hd. Screw



Safety Screw and Wrench

* **Furnished with Interchangeable Screws, either Safety or Non-Safety**



Safety Dog and Screws

(Continued from opposite page)

SCREWS. For the convenience of users and to permit jobbers to carry a reduced stock of Dogs, the size (diam. and thread) of Non-Safety Screws will be the same as for Safety Screws in corresponding Dogs. In other words, the two types of Screws can be interchanged. Consequently, if an assortment of Dogs complete with Safety Screws is carried, and also an assortment of extra Non-Safety Screws, the latter can be readily substituted at any time. This change is already effective in Dogs Nos. 21, 22, 23, 24, 25, 26, 28 and 29, marked * in table on opposite page. All other sizes of single and double screw Dogs will be altered similarly as rapidly as present stock of Dogs with Non-Safety Screws is exhausted.

When ordering extra Screws, please state whether Safety or Non-Safety type is wanted; if latter, specify also diam. of screw.

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS						LIST PRICE		No.
		Square Head			Safety					
		Size		List Price, Each	Size		List Price, Each	Safety Dog Wrench, Extra	Dog with either Screw	
		Diam.	Length Under Head		Diam.	Extreme Length				
132	4	7/8	3 3/4	$.70	1 1/2	2 5/8	$1.50	$.74	†$16.00	132
* 133	5	1 5/8	4 1/2	2.25	1 5/8	3 3/8	1.80	.90	† 24.00	133
* 134	6	1 5/8	4 1/2	2.25	1 5/8	3 3/8	1.80	.90	† 34.00	134

† Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price stated in table.

✦ REGISTERED TRADE MARK

Weights, page M.

WILLIAMS' +"VULCAN" DROP-FORGED MILLING MACHINE DOGS

With Flat, Bent Tail



These are designed for taper work carried between centers on milling machines, the flat tail works in the head-slot without the back-lash unavoidable in Dogs with taper tail. They serve also as a heavy pattern Lathe Dog.

The heads are made of sufficient size to permit re-tapping for one or two larger sizes of screws as the threads wear.

The Screws, threaded U. S. Standard, are made of a special grade of steel and are hardened and tempered.

Number	Capacity	Screw		LIST PRICE		Number
		Diameter	Length Under Head	Extra Screws, Each	Dog Complete	
42	1/2	3/8	1 1/4	$.20	$1.10	42
43	3/4	7/16	1 5/8	.24	1.20	43
44	1	1/2	2	.30	1.40	44
45	1 1/4	1/2	2 1/4	.32	1.70	45
46	1 1/2	9/16	2 3/8	.36	2.00	46
47	1 3/4	5/8	2 1/2	.40	2.40	47
48	2	5/8	2 7/8	.40	2.80	48

Weights, page M.

11-42

+ REGISTERED TRADE MARK

WILLIAMS' ✦"VULCAN" DROP-FORGED CLAMP LATHE DOGS



These are drop-forged from a strong, tough grade of carefully selected steel and are heat-treated after forging to increase further their strength and reduce the liability of springing.

The Screws, threaded U. S. Standard, are made of a special grade of steel, and are hardened and tempered. The Nuts are case-hardened. Extra Screws and Nuts carried in stock.

The Nuts furnish ready means of arrangement for the minimum projection of Screws beyond the body of Dog and thus lessen the danger to the operator when tool is in use.

Number	Capacity		Screws		LIST PRICE, Dog Complete	Number
	Maximum Opening	Distance Between Screws	Diameter	Length Under Head		
61	1 5/8	1 3/4	5/16	2 3/4	$3.00	61
62	1 7/8	2 1/4	3/8	3 5/16	4.00	62
63	2 1/2	2 3/4	7/16	4 1/4	5.00	63
64	3 1/4	3 1/2	1/2	5 3/8	7.00	64

Weights, page M.

✦ REGISTERED TRADE MARK

WILLIAMS' ✦"VULCAN"
DROP-FORGED HEAVY SERVICE "C" CLAMPS



These are drop-forged from a strong, tough grade of carefully selected steel. Specially heat-treated to increase further their strength and reduce the liability of springing, they are the strongest "C" Clamps on the market.

The Screws, threaded U. S. Standard, are made of a special grade of steel and are hardened and tempered.

With Long Screws the minimum capacity of all Clamps will be 0.

Clamps with Standard Screws will be furnished, unless otherwise specified.

No.	Capacity		Depth of Throat Center of Screw	Extreme Dimensions of Body		Standard Screw		LIST PRICE			
								Extra Screws		Clamps Complete with Either Screw	
	Max.	Min. With Std. Screw		Length	Width	Diam.	Length Under Head	Standard Each	Long Each		No.
0	3/4	0	3/4	2 1/4	2	5/16	1 1/2	$.20		$ 1.00	0
1	1 1/4	0	1 1/8	3 1/4	2 3/4	3/8	2 1/4	.24		1.50	1
1 1/2	1 3/4	11/16	1 1/2	4 1/4	3 5/8	1/2	2 1/4	.28	$.80	2.50	1 1/2
2	2 1/4	7/8	1 3/4	5 1/2	4 1/2	5/8	2 7/8	.40	1.16	3.50	2
3	3 1/4	1 5/16	2 3/8	7 1/4	5 3/4	3/4	3 3/4	.56	1.56	5.00	3
4	4 1/2	2	2 3/4	8 7/8	6 1/2	7/8	4 1/2	.76	2.00	6.50	4
5	5 1/2	2 1/2	3 1/8	10 3/8	7	7/8	5 3/8	1.00	2.50	8.00	5
6	6 1/2	3 1/16	3 3/8	12	7 7/8	1	5 7/8	1.30	3.10	10.00	6
8	8 1/2	4 1/4	3 3/4	14 3/8	8 1/2	1 1/8	7	1.70	4.20	14.00	8
10	10 1/2	6 3/8	4 1/8	16 7/8	9	1 1/8	7	1.70	5.10	19.00	10
12	12 1/2	7 5/8	4 1/2	19 3/8	9 3/4	1 1/4	8	2.40	7.20	25.00	12

Weights, page M.

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✦ REGISTERED TRADE MARK

WILLIAMS' ✦"AGRIPPA"
DROP-FORGED GENERAL SERVICE "C" CLAMPS



The design of these lighter Clamps enables them to provide the service formerly rendered by the heavier and clumsier steel clamps made by other processes. They are drop-forged from a special grade of strong, tough steel and are heat-treated. This process increases still further their strength and reduces any liability of springing.

The Screws, fitted with adjustable handle, are made of special steel, hardened and tempered; threaded U. S. Standard. The Swivels are drop-forged.

No.	Capacity		Depth of Throat from Center of Screw	Extreme Dimensions of Body		Screw		Size Handle		LIST PRICE			No.
	Max.	Min.		Length	Width	Diam.	Length under Hd. inc. Swivel	Diam.	Lgth.	Extra Screw, Handle and Swivel	Extra Swivel Only	Clamp Complete	
103	3	0	2	6 7/8	4 3/8	5/8	5 5/8	5/16	5 1/2	$1.20	$.40	$ 4.00	103
104	4	0	2 3/8	8 1/4	5 1/8	3/4	6 7/8	3/8	7	1.40	.50	4.50	104
106	6	2	2 1/2	10 3/8	5 3/8	3/4	6 7/8	3/8	7	1.40	.50	5.50	106
108	8	4	2 5/8	12 1/2	5 1/2	3/4	6 7/8	3/8	7	1.40	.50	6.50	108
110	10	6	2 3/4	14 5/8	5 3/4	3/4	6 7/8	3/8	7	1.40	.50	7.50	110
112	12	8	2 7/8	16 7/8	6	3/4	6 7/8	3/8	7	1.40	.50	8.50	112
115	15	10	3 1/16	20 1/4	6 1/2	7/8	8 1/8	7/16	8	2.40	.60	11.00	115
118	18	13	3 1/4	23 1/2	7	7/8	8 1/8	7/16	8	2.40	.60	14.00	118

Weights, page M.

✦ REGISTERED TRADE MARK

WILLIAMS' "LIGHT SERVICE" DROP-FORGED "C" CLAMPS

DISCONTINUED
WILL SUPPLY UNTIL STOCK IS EXHAUSTED



Drop-forged from specially selected steel and heat-treated to increase their strength and to reduce the liability of springing. Their design is best adapted for use in the various wood and metal working fields which do not demand the extremes of strength and service for which "Vulcan" and "Agrippa" Clamps provide. They take the place of tools less dependable, yet frequently more costly.

The Screws are made from tough, wrought steel and threaded especially for strength and rapid adjustment. Furnished with wrought steel Swivel, as illustrated.

No.	Capacity		Depth of Throat from Center of Screw	Extreme Dimensions of Body		Screw		LIST PRICE			No.
	Max.	Min.		Length	Width	Diam.	Length Over All	Screw, Handle and Swivel	Extra Swivel Only	Clamps Complete	
502	2	0	1 3/4	4 3/8	3 1/4	1/2	4 3/8	$.60	$.10	$1.50	502
503	3	0	2	5 1/2	3 5/8	1/2	5 3/8	.70	.10	1.80	503
504	4	0	2 3/8	6 7/8	4 3/8	5/8	7	.80	.15	2.20	504
506	6	0	3	9 3/8	5 1/4	5/8	8 1/4	1.00	.15	3.00	506
508	8	2	3 3/8	11 7/8	5 7/8	3/4	10	1.20	.20	4.00	508
510	10	3	3 3/4	14 1/8	6 3/8	3/4	11	1.50	.20	5.00	510
512	12	4	4	16 3/8	6 7/8	13/16	12 1/2	2.00	.30	6.50	512

A special clamp No. 444, 4" capacity, with throat 1 1/2" deep, can be furnished; details on request.
Weights, page M.

11-42

WILLIAMS' DEEP THROAT "BODY BUILDERS"

DROP-FORGED "C" CLAMPS

FOR LIGHT DUTY

TWO STYLES—STANDARD AND SPATTER-RESISTING



Standard
Nos. 402 to 412



Spatter-Resisting
Nos. 402-S to 412-S

Especially designed for use where the clearance provided by a deep throat is required, as in body building, welding, wood working, etc. Drop-forged from an unusually strong special steel and heat-treated for maximum strength, they combine dependable strength with minimum weight. Finished in two styles:—

Standard for body-builders, woodworkers and kindred trades. All parts are shot-blasted.

Spatter-Resisting for welding, completely Cadmium-plated to resist the adherence of welding spatter to the body, swivel and screw.

The Screws are made from tough, wrought steel, heat-treated and threaded especially for strength and rapid adjustment. Furnished with wrought steel Swivel, as illustrated.

Standard Clamps will be furnished unless otherwise specified.

No.		Capacity		Depth of Throat from Center of Screw	Extreme Dimensions of Body		Screw		LIST PRICE							
									Standard				Spatter-Resisting			
Std.	Spatter Resisting	Max.	Min.		Length	Width	Dia.	Length Over All	No.	Screw, and Swivel	Extra Swivel Only	Clamps Complete	No.	Screw, and Swivel	Extra Swivel Only	Clamps Complete
402	402-S	2	0	2	4 7/8	3 3/4	1/2	4 3/8	402	$.60	$.10	$1.50	402-S	$.90	$.15	$1.80
403	403-S	3	0	2 3/8	6 1/8	4 1/8	1/2	5 3/8	403	.70	.10	1.80	403-S	1.10	.15	2.25
404	404-S	4	0	2 3/4	7 5/8	4 3/4	5/8	7	404	.80	.15	2.20	404-S	1.35	.20	2.90
406	406-S	6	0	3 5/8	10 1/4	6	5/8	8 1/4	406	1.00	.15	3.00	406-S	1.60	.20	3.75
408	408-S	8	2	4 1/2	12 3/4	7	3/4	10	408	1.20	.20	4.00	408-S	1.85	.25	4.75
410	410-S	10	3	5 3/8	15 1/4	8 1/8	3/4	11	410	1.50	.20	5.00	410-S	2.10	.25	6.00
412	412-S	12	4	5 3/4	18	9 3/8	7/8	12 1/2	412	2.00	.30	6.50	412-S	2.60	.35	7.50

A special clamp No. 444, 4" capacity, with throat 1 1/2" deep, can be furnished; details on request. Weights, page M.

WILLIAMS' +"VULCAN" DROP-FORGED TOOL-MAKERS' "C" CLAMPS



With Plain Screw



With Swivel Screw

These Clamps are drop-forged from a strong, tough grade of steel and are heat-treated after forging to increase further their strength and reduce the liability of springing.

The Screws, with wings formed to permit use of lever, are supplied in two styles—Swivel and Plain. They are drop-forged from a special grade of steel and are hardened and tempered; threaded U. S. Standard.

Clamp bodies are shot-blasted; screws, black.

Clamps with Swivel Screw will be furnished, unless otherwise specified.

No.	Capacity		Depth of Throat	Extreme Dimensions		Screw		LIST PRICE			No.
	Max.	Min.		Length	Width	Diam.	Length	Extra Screw Only	Extra Swivel Only	Clamp Complete	
WITH PLAIN SCREW											
201	1	0	11/16	2 1/8	1 1/2	5/16	1 11/16	$.40		$1.00	201
202	2	5/16	13/16	3 3/8	1 7/8	3/8	2 7/16	.50		1.30	202
203	3	11/16	15/16	4 1/2	2 1/8	3/8	3 3/16	.60		1.70	203
204	4 1/4	1 3/16	1 1/8	6 3/8	2 1/2	7/16	4 1/8	.80		2.50	204
WITH SWIVEL SCREW											
201	3/4	0	11/16	2 1/8	1 1/2	5/16	1 11/16	$.90	$.35	$1.50	201
202	1 3/4	5/16	13/16	3 3/8	1 7/8	3/8	2 7/16	1.00	.35	1.80	202
203	2 3/4	11/16	15/16	4 1/2	2 1/8	3/8	3 3/16	1.20	.35	2.30	203
204	4	1 3/16	1 1/8	6 3/8	2 1/2	7/16	4 1/8	1.50	.50	3.20	204

Weights, page M.

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+ REGISTERED TRADE MARK

WILLIAMS' +"VULCAN"
DROP-FORGED MACHINISTS' CLAMPS



These Clamps are drop-forged from a strong, tough grade of carefully selected steel; all are heat-treated to increase still further their strength and to reduce the liability of springing.

The knurled portion of the hardened and tempered Screws permits rapid and easy adjustment.

The edges of the jaws are ground bright, thus adding to the appearance of the Clamp.

When ordering extra Screws specify whether for *end* or *center*; lengths given are under-head dimensions and prices are for each of either screw.

Each Clamp is packed in a box for convenient shelving.

No.	Capacity		Screws				LIST PRICE		No.
	Maximum Opening	Length Jaw from Screw	End		Center		Extra Screws Each	Complete Clamp	
			Diam.	Length	Diam.	Length			
301	1 1/4	1 3/4	5/16	2 1/8	5/16	2 5/8	$.50	$3.00	301
302	2 1/4	2 1/4	3/8	3 1/4	3/8	3 15/16	.70	4.00	302
303	3 1/4	2 3/4	7/16	4 5/8	7/16	5 1/4	1.00	5.00	303
304	4 1/4	3 1/4	1/2	5 3/4	1/2	6 1/2	1.40	6.00	304

Weights, page M.

+ REGISTERED TRADE MARK

WILLIAMS' ✦"VULCAN" DROP-FORGED STRAP CLAMPS



Plain Slot | Adjustable Step | Goose Neck | Finger, Double End | Finger, Single End | "U" Pattern

These forgings are made from a strong, tough grade of carefully selected steel and are heat-treated after forging to increase their strength and stiffness.

On Planer, Lathe, Drill Press, Milling and Boring Machine work they are time-saving and effective—far more efficient than any make-shift clamp.

Because of draft or taper on forgings, minimum dimensions of slot are given.

PLAIN SLOT PATTERN

No.	Length	Width		Thickness		Slot; Min. Dimensions		LIST PRICE	No.
		Ends	Center	Ends	Center	Length	Width		
54	4	1 3/16	1 5/8	1/2	3/4	1 3/8	11/16	$.60	54
56	6	1 1/4	1 3/4	9/16	7/8	2 1/16	11/16	1.00	56
58	8	1 1/2	2 1/8	3/4	1 1/8	2 13/16	13/16	1.70	58
59	10	1 3/4	2 1/2	15/16	1 3/8	3 11/16	15/16	2.80	59

ADJUSTABLE STEP PATTERN

No.	Length	Width		Thickness		Slot; Min. Dimensions		Screws		LIST PRICE		No.
		Ends	Center	Ends	Center	Length	Width	Diam.	Length Under Head	Extra Screws, each	Complete Clamps, each	
54A	4	1 3/16	1 5/8	1/2	3/4	1 3/8	11/16	1/2	1 1/4	$.28	$1.10	54A
56A	6	1 1/4	1 3/4	9/16	7/8	2 1/16	11/16	5/8	1 1/2	.36	1.70	56A
58A	8	1 1/2	2 1/8	3/4	1 1/8	2 13/16	13/16	3/4	1 3/4	.50	2.60	58A
59A	10	1 3/4	2 1/2	15/16	1 3/8	3 11/16	15/16	7/8	2 1/8	.70	4.00	59A

GOOSE NECK PATTERN

No.	Length	Width		Thickness		Slot; Min. Dimensions		Neck Offset	LIST PRICE	No.
		Ends	Center	Ends	Center	Length	Width			
74	4	1 3/16	1 5/8	3/8 & 1/2	3/4	15/16	11/16	13/16	$.60	74
76	6	1 1/4	1 3/4	7/16 & 9/16	7/8	1 11/16	11/16	15/16	1.00	76
78	8	1 1/2	2 1/8	9/16 & 3/4	1 1/8	2 7/16	13/16	1 1/8	1.70	78

FINGER PATTERN, DOUBLE END

No.	Length	Width Center	Thickness Center	Min. Diameter Hole	Finger Dimensions	LIST PRICE	No.
30	3	1 1/2	5/8	11/16	1/2 x 1/2	$.40	30
35	3 1/2	1 5/8	3/4	11/16	5/8 x 5/8	.50	35
40	4	1 13/16	7/8	13/16	3/4 x 3/4	.70	40

FINGER PATTERN, SINGLE END

No	Length	Width		Thickness		Slot; Min. Dimensions		Finger Dimensions	LIST PRICE	No.
		Flat End	Center	Flat End	Center	Length	Width			
44	4	1 3/16	1 5/8	7/16	3/4	1 3/8	11/16	1/2 x 1/2	$.60	44
46	6	1 1/4	1 3/4	1/2	7/8	1 15/16	11/16	5/8 x 5/8	1.00	46
48	8	1 1/2	2 1/8	5/8	1 1/8	2 9/16	13/16	3/4 x 3/4	1.70	48

"U" PATTERN

No.	Length	Maximum Width	Thickness	Slot; Min. Dimensions		Finger Dimensions	LIST PRICE	No.
				Length	Width			
64	4 1/2	1 3/4	3/4	3 1/2	11/16	1/2 x 1/2	$.60	64
66	6 5/8	2	7/8	5 1/2	11/16	5/8 x 5/8	1.00	66
68	8 3/4	2 1/2	1 1/8	7 3/8	13/16	3/4 x 3/4	1.70	68

Weights, page M.

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✦ REGISTERED TRADE MARK

WILLIAMS' ✦ "VULCAN"

MACHINE HANDLE FORGINGS

UNFINISHED

With Smooth, Planished Surface

BALL PATTERN



Number	00	0	1	2	3	4	5	6	7
Extreme Length	2	2 1/4	2 3/4	3 1/4	3 7/8	4 1/2	5 1/8	5 7/8	6 5/8
Standard Length, Shank	1/2	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
Maximum Length, Shank	11/16	3/4	1	1 1/8	1 1/4	1 1/2	1 7/8	2	2 1/8
Diameter, Shank	5/16	11/32	13/32	15/32	15/32	17/32	19/32	11/16	3/4
LIST PRICE	$.21	$.21	$.23	$.29	$.36	$.46	$.57	$.69	$.84

CONE PATTERN



Number	11	13	15	16
Extreme Length	3 1/2	4 1/2	5 1/2	6
Standard Length, Shank	1/2	3/4	7/8	1 1/8
Maximum Length, Shank	11/16	1 1/8	1 3/8	1 1/2
Diameter, Shank	3/8	7/16	1/2	9/16
LIST PRICE	$.29	$.46	$.57	$.69

Weights, page M.

✦ REGISTERED TRADE MARK

WILLIAMS' +"VULCAN"
DROP-FORGED BALANCE HANDLES



Unfinished are plain forgings without any hole in hub.

Broached have holes finished, but are otherwise plain forgings.

Finished are broached, ground, polished, case-hardened all over and lacquered to prevent rusting.

The broached openings are made with corners slightly rounded to prevent breakage and a slight clearance is provided.

Holes are regularly finished to standard sizes given below but each forging admits of broaching to the maximum dimensions stated in table. Smaller openings than standard and special sizes can be broached to order. Handles can also be supplied with round holes in hub; details on application.

No.	Length			Hub		Square Hole, Size Broached		Ball, Diam.	LIST PRICE			No.
	C Hub to C Handle	Extreme	Handle Above Arm	Diam.	Length	Standard in Stock	Maximum to Order		Unfinished	Broached	Finished	
512	1 1/4	3 5/16	1 15/16	7/8	3/4	7/16	1/2	7/8	$.79	$1.32	$2.30	512
516	1 5/8	4	2 1/4	7/8	7/8	7/16	1/2	1 1/4	.87	1.40	2.45	516
‡520	2	5	2 5/8	1	15/16	1/2	5/8	1 1/4	.96	1.49	2.65	‡520
‡522	2 1/4	5 1/2	2 3/4	1 1/4	1	1/2	13/16	1 3/8	1.05	1.58	2.90	‡522
‡525	2 1/2	6	2 13/16	1 1/4	1 1/8	5/8	13/16	1 7/16	1.23	1.85	3.30	‡525
529	2 7/8	7	3 5/16	1 1/4	1 1/4	5/8	13/16	1 1/2	1.50	2.10	3.85	529
434	3 3/8	8	3 7/16	†1 1/2	7/8	5/8	3/4	1 3/4	2.10	2.70	4.90	434
439	3 7/8	9	3 1/2	†1 5/8	1 1/16	5/8	3/4	1 3/4	2.65	3.25	5.90	439

‡ Handle cone-shaped; see Crank Handle cut on opposite page.

† Hub is a sphere, flattened on top and bottom; full size drawing on request.

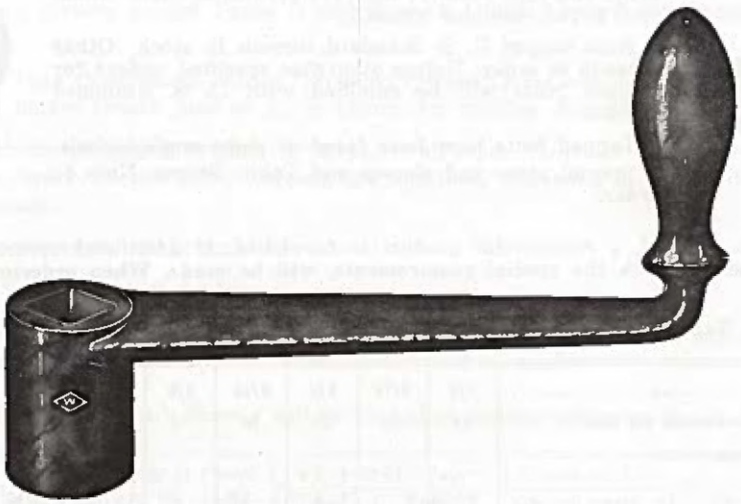
Weights, page M.

+ REGISTERED TRADE MARK

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WILLIAMS' +"VULCAN"

DROP-FORGED CRANK HANDLES





Unfinished are plain forgings without hole in hub.

Broached have holes finished and hubs recessed or counterbored in free end, but are otherwise plain forgings.

Finished are broached, counterbored in free end of hub, ground, polished, case-hardened all over and lacquered to prevent rusting.

The broached openings are made with corners slightly rounded to prevent breakage and a slight clearance is provided.

Holes are regularly finished to standard sizes given below, but each forging admits of broaching to the maximum dimensions stated. Smaller openings than standard and special sizes, running by sixteenths from 1/2 to 1 inch inclusive, and thence by eighths, can be broached to order at extra cost.

Hubs of Broached, or Finished can be cut to shorter lengths and Handles will be offset (see small cut) if desired, at an additional charge.

No.	Length			Hub		Square Hole Size Broached		LIST PRICE			No.
	Center to Center	Extreme	Handle above Arm	Diam.	Length	Standard in Stock	Maximum to Order	Unfinished	Broached	Finished	
00	1 3/4	2 5/8	2 3/8	1	1 1/4	1/2	5/8	$.70	$1.22	$1.85	00
0	2 1/4	3 1/8	2 1/2	1	1 1/4	1/2	5/8	.78	1.30	2.00	0
1	3	4	2 3/4	1 1/4	1 1/2	9/16	13/16	.88	1.40	2.30	1
2	3 1/2	4 1/2	2 7/8	1 1/16	1 5/16	1/2	5/8	.88	1.40	2.30	2
4	4	5 1/8	3 1/8	1 1/4	1 3/8	9/16	13/16	1.05	1.60	2.65	4
6	5	6 1/8	3 1/8	1 1/4	1 13/16	5/8	13/16	1.30	1.95	3.15	6
8	6	7 1/8	3 1/8	1 1/4	1 15/16	11/16	13/16	1.65	2.40	3.85	8
10	7	8 1/4	3 3/8	1 3/8	2 1/16	3/4	7/8	2.10	2.95	4.75	10
12	8	9 3/8	3 5/8	1 9/16	2 7/16	7/8	1	2.65	3.60	5.80	12
14	9 1/8	10 1/2	3 3/4	1 1/2	2 1/2	7/8	1	3.00	4.00	6.50	14
16	10	11 1/2	4	1 3/4	3	1	1 1/8	3.95	5.15	8.15	16

Weights, page M.

+ REGISTERED TRADE MARK

WILLIAMS' DROP-FORGED THUMB NUTS

Blank or Tapped



Type A

These are drop-forged from a fine grade of steel that drills and taps readily; they are furnished either Blank or Tapped, tumbled smooth.

Nuts tapped U. S. Standard threads in stock. Other threads to order. Unless otherwise specified, orders for Tapped Nuts will be supplied with U. S. Standard threads.

Tapped Nuts have base faced at right angle to hole.

Special sizes and shapes and Tobin Bronze Nuts to order.



Type B

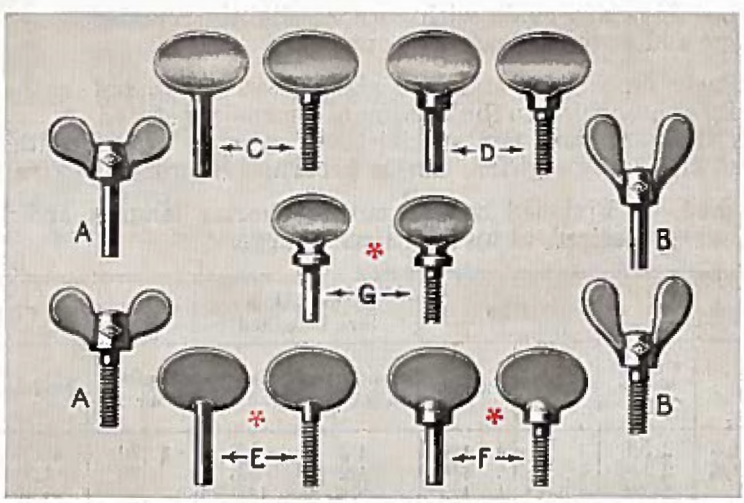
When tapping is ordered, a commercial product is furnished. If additional accuracy is required an extra charge, consistent with the special requirements, will be made. When ordering indicate pattern (A or B) by letter.

Tapped Thumb Nuts will be furnished, unless otherwise specified.

For Bolt; Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
U. S. Std. (Natl. Course)—Threads Per Inch	40	24	20	18	16	14	13	12	11	10
Extreme Width across Wings										
Type A	3/4	15/16	1 1/8	1 7/16	1 11/16	2	2 1/4	2 9/16	2 3/4	3 1/4
Type B	25/32	1	1 3/16	1 3/8	1 5/8	1 7/8	2 1/16	2 3/8	2 9/16	3
Diameter, Top of Barrel	1/4	5/16	3/8	7/16	17/32	5/8	21/32	3/4	13/16	15/16
LIST PRICE, per 100,										
Blank	$ 3.50	4.00	4.50	5.20	6.50	8.00	10.00	12.00	14.50	21.00
Tapped U. S. Standard, unless otherwise specified	$ 9.00	10.00	11.00	13.00	16.00	20.00	25.00	30.00	34.00	46.00

WILLIAMS' DROP-FORGED THUMB SCREWS

All Types Furnished Either Blank or Threaded



*Types E, F, and G will be Discontinued when present stock is exhausted.

Drop-forged from a fine grade of steel that threads readily and tumbled smooth. Special sizes and shapes and Tobin Bronze Screws to order.

Type G is made in 1/4, 5/16 and 3/8 inch diameters in all regular lengths.

Dies for the following Screws have not yet been made, consequently these sizes are not now carried in stock; 7/16 inch diameter Type B, 9/16 inch diameter Types A, B, E and F, 5/8 inch diameter Types E and F, 3/4 inch diameter Types A, B, D, E and F.

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(Continued on next page)

Weights, page M.

WILLIAMS' DROP-FORGED THUMB SCREWS

BLANK, OR THREADED

See illustrations on opposite page

Threaded Thumb Screws, except Types C and E, over 4 inches long have threads running up only 4 inches.

Lengths, longer than those listed, can be furnished specially from available dies; intermediate lengths take price of next longer length plus an extra charge for cutting. Electric Welding to order only.

Screws with U. S. Standard threads in stock. Whitworth Standard supplied at regular prices; other threading to order. Unless other threads are specified, Threaded Screws will be furnished with U. S. Standard threads.

Screws with special points can be supplied to order.

When ordering indicate pattern by letter.

When threading is ordered, a commercial product is furnished. If additional accuracy is required an extra charge, consistent with the special requirements, will be made.

Threaded Thumb Screws will be furnished, unless otherwise specified.

Width of Head	Diameter Screw and U. S. Standard (Natl. Coarse) Threads per Inch										Width of Head
	1/8 40	3/16 24	1/4 20	5/16 18	3/8 16	7/16 14	1/2 13	9/16 12	5/8 11	3/4 10	
Type A	3/4	15/16	1 1/8	1 7/16	1 11/16	2	2 1/4		2 3/4		Type A
B	25/32	1	1 3/16	1 3/8	1 5/8		2 1/16		2 9/16		B
C-D	19/32	27/32	1	1 3/16	1 3/8	1 9/16	1 3/4	1 7/8	2 1/16	*2 1/4	C-D
E-F	5/8	7/8	1 1/16	1 1/4	1 3/8	1 9/16	1 3/4				E-F
* G			31/32	1	1 1/4						G*

*To be Discontinued when present stock is exhausted.

*Type C only; D not made.

BLANK, List Price per 100

Length Under Head											Length Under Head
1/4	$ 6.80	$ 7.40	$ 8.00	$ 9.00	$10.20						1/4
1/2	7.10	7.70	8.30	9.30	10.50	$12.00	$14.00	$18.00			1/2
3/4	7.40	8.00	8.60	9.60	10.80	12.40	14.40	18.50			3/4
1	7.70	8.30	8.90	9.90	11.10	12.80	14.80	19.10	$ 24.50	$40.00	1
1 1/4	8.00	8.60	9.20	10.20	11.40	13.20	15.30	19.80	25.50	41.00	1 1/4
1 1/2	8.30	8.90	9.50	10.60	11.80	13.70	15.80	20.60	26.60	42.10	1 1/2
1 3/4		9.20	9.80	11.00	12.20	14.20	16.40	21.50	27.80	43.40	1 3/4
2		9.60	10.20	11.40	12.60	14.70	17.00	22.50	29.10	44.90	2
2 1/4			10.60	11.80	13.00	15.30	17.70	23.60	30.50	46.40	2 1/4
2 1/2			11.00	12.20	13.40	15.90	18.40	24.80	32.00	48.40	2 1/2
2 3/4			11.40	12.60	13.90	16.50	19.20	26.10	33.60	50.40	2 3/4
3			11.80	13.00	14.40	17.20	20.20	27.50	35.30	52.70	3
3 1/2				13.80	15.40	18.60	22.60	30.30	38.90	57.50	3 1/2
4				14.60	16.60	20.40	25.60	34.00	44.00	63.60	4

THREADED, List Price per 100

U. S. Standard Threads will be furnished, unless otherwise specified.

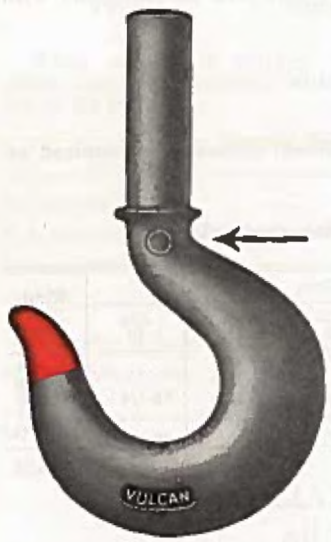
1/4	$10.80	$11.40	$12.50	$14.00	$16.20						1/4
1/2	11.30	11.90	13.00	14.50	16.70	$19.20	$22.60	$29.50			1/2
3/4	11.80	12.40	13.50	15.00	17.20	19.90	23.30	30.30			3/4
1	12.40	13.00	14.10	15.60	17.80	20.70	24.10	31.30	$40.10	$62.00	1
1 1/4	13.00	13.60	14.70	16.20	18.40	21.60	25.10	32.60	41.70	63.60	1 1/4
1 1/2	13.70	14.30	15.40	17.00	19.20	22.70	26.20	34.00	43.40	65.40	1 1/2
1 3/4		15.00	16.10	17.90	20.10	23.80	27.50	35.50	45.20	67.50	1 3/4
2		15.90	17.00	18.80	21.00	24.90	28.80	37.30	47.30	69.90	2
2 1/4			17.90	19.70	22.00	26.10	30.20	39.20	49.60	72.40	2 1/4
2 1/2			18.80	20.60	23.00	27.30	31.60	41.20	52.00	75.60	2 1/2
2 3/4			19.70	21.60	24.10	28.50	33.10	43.30	54.50	79.00	2 3/4
3			20.60	22.60	25.20	29.80	34.80	45.50	57.20	82.70	3
3 1/2				24.60	27.40	32.60	38.90	50.10	63.10	90.70	3 1/2
4				26.70	30.00	36.00	44.10	56.00	71.00	100.40	4

Weights, page M.

WILLIAMS' +"VULCAN" DROP-FORGED HOIST HOOKS

The Hooks with the Orange Tip

Shank Pattern



Heat Treating. After forging, every "Vulcan" Hook is accurately heat-treated for maximum strength and toughness—the liability of breakage is reduced to the minimum.

Proof-Testing. To insure proper service at listed capacity every hook, after heat-treatment is proof-tested on a standard tension machine to *fifty per cent beyond* its rated "Safe Working Load." Each Hook so tested is stamped **O**, as illustrated, and hence can be readily identified as *"proof-tested."*

(Continued on following page)

† Shanks of Nos. 13, 14, 15, 15A, 16 and 16A can be made longer if desired at an additional charge of $.55, .80, 1.05, 1.30, 1.40 and 1.75 (list price) per extra inch or fraction thereof, respectively.

‡ 15A and 16A Hooks are made from special alloy steel; others from carbon steel.

No.	Shank		Opening, or Throat	Extreme Dimensions		Capacity Shanks Blank, Tons of 2000 lbs.			LIST PRICE	No.
	Diam., Nominal Rough Size	Length		Length	Width	Safe Working Load	Average Load at Elastic Limit	Approximate Load Required to Straighten out		
2	1/2	2	1	5	2 7/8	.5	.9	1.9	$.32	2
3	9/16	2 1/4	1 1/16	5 1/2	3 1/8	.6	1.2	2.3	.37	3
4	5/8	2 1/2	1 1/8	6	3 1/2	.7	1.5	3.	.44	4
5	3/4	2 3/4	1 1/4	6 3/4	3 7/8	1.2	2.5	5.7	.58	5
6	7/8	3	1 3/8	7 1/2	4 3/8	1.7	3.5	7.	.85	6
7	1	3 1/4	1 1/2	8 1/4	4 7/8	2.1	4.2	8.5	1.25	7
8	1 1/8	3 1/2	1 3/4	9 1/4	5 5/8	2.5	5.4	10.	1.80	8
9	1 1/4	3 3/4	1 7/8	10 1/4	6 3/8	3.	6.2	13.	2.45	9
10	1 3/8	4	2 1/16	11	6 7/8	4.	8.	17.	3.20	10
11	1 1/2	4 1/4	2 1/4	12	7 1/2	4.7	9.	19.	4.10	11
12	1 5/8	4 1/2	2 1/2	13	8 1/4	5.5	11.	26.	5.60	12
13	1 3/4	†5	3	14 1/2	9 1/4	6.8	13.	32.	7.80	13
14	2	†5 1/2	3 3/8	16	11	8.	17.	35.	12.00	14
15	2 3/8	†6	4	17 7/8	13 1/2	11.	21.	48.	23.00	15
‡15A	2 3/8	†6	4	17 7/8	13 1/2	15.	25.	55.	39.00	‡15A
16	2 3/4	†7	4 1/2	21 1/2	15	20.	40.	80.	60.00	16
‡16A	2 3/4	†7	4 1/2	21 1/2	15	25.	50.		70.00	‡16A

Weights, page M.

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+ REGISTERED TRADE MARK

WILLIAMS' +"VULCAN" DROP-FORGED HOIST HOOKS

The Hooks with the Orange Tip

Eye Pattern—Weldless

(*Continued from preceding page*)

Use the Hook with the orange tip—no other standard line offers such assurance of safety and care in manufacture.

For Safety Chains on railroad cars, a Hook, approximately No. 27 in size and with eye at right angle, can be furnished to order in reasonable quantities; see small illustration. Full size drawing on request.

Tobin Bronze Hooks from standard or special dies to order in quantities; prices on application.

‡36A Hook is made from special alloy steel: others from carbon steel.



No.	Diameter of Eye		Opening, or Throat	Extreme Dimensions		Capacity, Tons of 2000 lbs.			LIST PRICE	No.
	Inside	Outside		Length	Width	Safe Working Load	Average Load at Elastic Limit	Approximate Load Required to Straighten out		
22	3/4	1 1/2	1	4 3/8	2 7/8	.5	.9	1.9	$.36	22
23	7/8	1 3/4	1 1/16	4 7/8	3 1/8	.6	1.2	2.3	.43	23
24	1	2	1 1/8	5 3/8	3 1/2	.7	1.5	3.	.53	24
25	1 1/8	2 1/4	1 1/4	6 3/16	3 7/8	1.2	2.5	5.7	.73	25
26	1 1/4	2 1/2	1 3/8	6 7/8	4 3/8	1.7	3.5	7.	1.05	26
27	1 3/8	2 3/4	1 1/2	7 5/8	4 7/8	2.1	4.2	8.5	1.50	27
28	1 1/2	3	1 3/4	8 9/16	5 5/8	2.5	5.4	10.	2.10	28
29	1 5/8	3 1/4	1 7/8	9 9/16	6 3/8	3.	6.2	13.	2.85	29
30	1 3/4	3 1/2	2 1/16	10 3/8	6 7/8	4.	8.	17.	3.70	30
31	2	4	2 1/4	11 1/2	7 1/2	4.7	9.	19.	4.70	31
32	2 3/8	4 5/8	2 1/2	13	8 1/4	5.5	11.	26.	6.40	32
33	2 3/4	5 1/4	3	14 3/4	9 1/4	6.8	13.	32.	9.40	33
34	3 1/8	6 1/8	3 3/8	16 3/4	11	8.	17.	35.	18.50	34
35	3 1/2	7	4	19 1/8	13 1/2	11.	21.	48.	35.00	35
36	4	8 1/2	4 1/2	22 3/4	15	20.	40.	80.	86.00	36
‡36A	4	8 1/2	4 1/2	22 3/4	15	25.	50.		100.00	‡36A

Weights, page M.

+ REGISTERED TRADE MARK

WILLIAMS' +"VULCAN" WELDLESS EYE BOLTS

PLAIN PATTERN

Blank or Threaded



These carbon steel Eye Bolts are specially heat-treated, after forging, to increase further their strength and toughness and reduce the liability of breakage.

To insure proper service at listed capacity, every "Vulcan" Eye Bolt, after heat-treatment, is proof tested on a standard tension machine before threading to *fifty per cent beyond* its "Safe Working Load."

Each Eye Bolt so tested is stamped O near its piece number, which appears in raised letters on the forging, and hence can be readily identified as *"proof-tested."*

U. S. Std. Threaded Eye Bolts of Standard length are in stock; threaded prices are for these with either U. S. or Whitworth Std. Threads; longer lengths and special threads extra.

Tobin Bronze Eye Bolts for marine work from standardard or special dies to order in quantities; prices on request. Eye Bolts can be galvanized to order at extra cost. Prices given for special Eye Bolts on receipt of drawings, or models and specifications.

(Continued on following page)

When ordering, please state whether Blank or Threaded are desired; Blank (shank not threaded) will be supplied, unless otherwise specified.

No.	Shank: Diam.; Nominal Rough Size; Blank	Shank: Std. Length under Eye, Blank and Thd.	Shank: Maximum Length in Stock; Blank	Diameter Eye: Inside	Diameter Eye: Outside	Capacity Blanks; Tons of 2000 lbs.: Safe Working Load	Capacity Blanks; Tons of 2000 lbs.: Breaking Strain, Apprx.	LIST PRICE, Each: Blank: Standard Lgth. (A)	Blank: Extra for Lgth. up to Max. (B)	Blank: Extra per *Inch over Max. (C)	Threaded: Standard Lgth.	Threaded: Extra per *Inch for Thd. only (D)	No.
3	3/8	1 1/4	4 1/2	1	1 21/32	.7	3.	$.11	$.11	$.06	$.16	$.05	3
4	7/16	1 3/8	4 1/2	1 3/32	1 27/32	1.	4.	.12	.12	.06	.18	.05	4
5	1/2	1 1/2	4 1/2	1 3/16	2 1/16	1.3	5.	.14	.14	.06	.21	.05	5
6	9/16	1 5/8	4 1/2	1 9/32	2 9/32	1.5	6.	.17	.17	.08	.25	.05	6
7	5/8	1 3/4	4 1/2	1 3/8	2 1/2	2.	8.	.22	.22	.10	.32	.06	7
8	3/4	2	5	1 1/2	2 13/16	3.	12.	.30	.24	.12	.42	.06	8
9	7/8	2 1/4	5	1 11/16	3 1/4	3.5	16.	.40	.26	.14	.55	.06	9
10	1	2 1/2	5	1 13/16	3 9/16	4.	20.	.55	.30	.17	.74	.07	10
11	1 1/8	2 3/4	5	2	4	5.	23.	.80	.35	.20	1.04	.08	11
12	1 1/4	3	6	2 3/16	4 7/16	7.5	33.	1.15	.50	.23	1.45	.10	12
14	1 1/2	3 1/2	6	2 1/2	5 3/16	9.	42.	2.00	.65	.33	2.50	.14	14
15	1 3/4	3 3/4	6	2 7/8	6 1/16	11.	53.	3.00	.80	.48	3.75	.20	15
16	2	4	6	3 1/4	6 7/8	13.	68.	4.25	1.00	.65	5.30	.27	16
17	2 1/2	5	6	4	8 9/16	16.	85.	7.00	.75	1.00	8.80	.36	17

Weights, page M.

*Extra per inch, or fraction thereof.

+ REGISTERED TRADE MARK

11-42

WILLIAMS' +"VULCAN" WELDLESS EYE BOLTS

SHOULDER PATTERN

Blank or Threaded

(Continued)

On standard length Threaded Eye Bolts of Shoulder Pattern the thread runs within 1/8" (No. 21) to 3/4" (No. 36) of shoulder, which is faced.



Prices for either Plain, or Shoulder Eye Bolts of "Extra Length" apply only to forgings which may be in stock at time ordered.

To determine *List Price* for *Threaded* Eye Bolts of other than standard length:—

1. Determine price of Blank (see A, B and C in table).
2. Add for threading (see D).
3. If quantity is less than 100 of same pattern and shank diameter, shorter or longer than standard, add $2.00 NET for the lot to cover "set-up" charge.
4. Shorter lengths than standard take Standard Threaded List, plus "set-up" charge, if any.

Example:—50 No. 28—8" long, Threaded 3"

Blank—Std. Length 2"	(A)	$.30
Extra to Max. 5"	(B)	.24
Additional 3" @ 12c	(C)	.36
Threading—3" @ 6c	(D)	.18
LIST PRICE, Each		$1.08

"Set-Up" NET charge, $2.00 extra for the lot.

When ordering, please state whether Blank or Threaded are desired; Blank (shank not threaded) will be supplied, unless otherwise specified.

No.	Shank: Diam.; Nominal Rough Size; Blank	Shank: Std. Lgth. under Shldr. Blank and Thd.	Shank: Maximum Lgth. in Stock; Blank	Eye, Diameter: Inside	Eye, Diameter: Outside	Capacity Blanks; Tons of 2000 lbs.: Safe Working Load	Capacity Blanks; Tons of 2000 lbs.: Breaking Strain, Apprx.	LIST PRICE, Each: Blank: Standard Lgth. (A)	LIST PRICE, Each: Blank: Extra for Lgth. up to Max. (B)	LIST PRICE, Each: Blank: Extra per *Inch over Max. (C)	LIST PRICE, Each: Threaded: Standard Lgth.	LIST PRICE, Each: Threaded: Extra per *Inch for Thd. only (D)	No.
21	1/4	1	3	3/4	1 3/16	.2	1.5	$.09	$.09	$.06	$.14	$.05	21
22	5/16	1 1/8	4	7/8	1 7/16	.4	2.	.10	.10	.06	.15	.05	22
23	3/8	1 1/4	4 1/2	1	1 21/32	.7	3.	.11	.11	.06	.16	.05	23
24	7/16	1 3/8	4 1/2	1 3/32	1 27/32	1.	4.	.12	.12	.06	.18	.05	24
25	1/2	1 1/2	4 1/2	1 3/16	2 1/16	1.3	5.	.14	.14	.06	.21	.05	25
26	9/16	1 5/8	4 1/2	1 9/32	2 9/32	1.5	6.	.17	.17	.08	.25	.05	26
27	5/8	1 3/4	4 1/2	1 3/8	2 1/2	2.	8.	.22	.22	.10	.32	.06	27
28	3/4	2	5	1 1/2	2 13/16	3.	12.	.30	.24	.12	.42	.06	28
29	7/8	2 1/4	5	1 11/16	3 1/4	3.5	16.	.40	.26	.14	.55	.06	29
30	1	2 1/2	5	1 13/16	3 9/16	4.	20.	.55	.30	.17	.74	.07	30
31	1 1/8	2 3/4	5	2	4	5.	23.	.80	.35	.20	1.04	.08	31
32	1 1/4	3	6	2 3/16	4 7/16	7.5	33.	1.15	.50	.23	1.45	.10	32
34	1 1/2	3 1/2	6	2 1/2	5 3/16	9.	42.	2.00	.65	.33	2.50	.14	34
35	1 3/4	3 3/4	6	2 7/8	6 1/16	11.	53.	3.00	.80	.48	3.75	.20	35
36	2	4	6	3 1/4	6 7/8	13.	68.	4.25	1.00	.65	5.30	.27	36

Weights, page M.

*Extra per inch, or fraction thereof.

+ REGISTERED TRADE MARK

WILLIAMS' MISCELLANEOUS EYE BOLTS

CARBON STEEL—WELDLESS



Type A



B 17, 25, 30, 35



Type B

These are furnished in two styles or types, A and B, and are carried in stock with shanks blank (not threaded), but will be supplied threaded to order at extra charge.

Full size drawings will be sent on request.

Type	No.	Shank		Diameter Eye		LIST PRICE, Blank	No.	Type
		Diameter	Length	Inside	Outside			
A	1	1/4	* 3/4	3/8	3/4	$.07	1	A
	10	3/8	3	3/4	1 3/8	.12	10	
	12	3/8	3	3/8	1	.12	12	
A	11	7/16	2 3/16	1 7/32	2 7/32	.30	11	A
	13	7/16	2 3/4	5/8	1 3/8	.14	13	
	14	15/32	1 5/8	1/2	1 1/4	.11	14	
A	15	1/2	2	9/16	1 1/4	.11	15	A
	16	1/2	3/4	1 3/8	2 3/8	.26	16	
	17	1/2	4	1	1 3/4	.17	17	
A	20	9/16	2	5/8	1 1/2	.14	20	A
	25	5/8	1 3/4	7/8	1 5/8	.14	25	
	26	5/8	*1 3/4	1 1/8	2	.20	26	
A	40	13/16	3 1/4	3/4	2 1/8	.35	40	A
	55	1	1 5/16	7/8	2 3/8	.35	55	
	58	1 1/16	4 1/8	1 1/8	2 7/8	.65	58	
B	1	1/4	1/2	3/8	3/4	.05	1	B
	4	5/16	3	5/16	15/16	.12	4	
	5	3/8	6	1/2	1 1/8	.25	5	
	10	7/16	1 1/8	1	1 3/4	.11	10	
B	15	1/2	*1 1/2	13/16	1 13/16	.14	15	B
	16	1/2	3 1/4	7/16	1 7/16	.15	16	
	17	†1/2	1 3/4	1/2	1 1/8	.10	17	
B	25	†5/8	2 3/8	1/2	1 1/4	.12	25	B
	26	5/8	2 3/4	11/16	1 11/16	.15	26	
	27	5/8	3/4	1 1/2	2 1/2	.26	27	
B	30	†11/16	2 1/2	9/16	1 7/16	.14	30	B
	35	†3/4	2 3/4	5/8	1 5/8	.16	35	
	45	7/8	4 1/8	1 1/8	2 3/8	.35	45	
	50	15/16	*5	1 1/8	2 3/8	.55	50	
	55	1	2 3/4	3/4	2	.30	55	

† Shanks of B 17, 25, 30 and 35 are 7/16, 1/2, 9/16 and 5/8 inch in diameter for 3/4, 1, 1 and 1 1/8 inch from end respectively, as illustrated above.

* Also carried in stock in the following maximum lengths at list prices shown:—No. A-1, 3", $.16; No. A-26, 4½", $.42; No. B-15, 4½", $.28; No. B-50, 8", $.85.

11-42

WILLIAMS' DROP-FORGED ROD ENDS

UNFINISHED



These Rod or Stub Ends are drop-forged from mild steel which welds easily.

Dimensions show sizes of unfinished forgings. Prices will be given for special forms on receipt of models or drawings and specifications stating quantity required.

No.	Shank		Head		LIST PRICE		No.
	Diameter	Standard Length under Head	Diameter	Thickness	Extra Length per inch, or less	Standard Rod Ends	
0B	3/16	4 13/16	3/8	1/4		$.17	0B
1B	1/4	2 11/16	9/16	1/2		.16	1B
1C	1/4	*5	5/8	1/4	$.03	.18	1C
1D	1/4	*2 3/8	7/16	1/4		.12	1D
1 1/2A	9/32	*5	11/16	9/32	.03	.28	1 1/2A
2A	5/16	*3 3/4	3/4	7/16	.03	.19	2A
2B	5/16	3 1/8	3/4	5/16		.09	2B
2C	5/16	5 3/4	3/4	3/8		.17	2C
2D	5/16	1 1/4	13/16	3/8		.10	2D
3A	3/8	*2	1	3/8	.03	.10	3A
3B	3/8	*3 3/8	21/32[1]	3/4	.04	.36	3B
3C	3/8	*3 1/2	13/16	3/8	.04	.10	3C
3D	3/8	*3 1/2	9/16	9/16	.04	.19	3D
3E	3/8	3 1/8	5/8	5/8		.18	3E
3F	3/8	1 1/8	3/4	3/8		.08	3F
3G	3/8	1 7/16	5/8	3/8		.09	3G
3H	3/8	1 5/8	3/4	3/8		.10	3H
3J	3/8	3 1/16	7/8	3/8		.14	3J
4B	7/16	*4 1/2	15/16	5/8	.04	.19	4B
4C	7/16	*3 3/8	13/16[2]	3/4	.04	.31	4C
4D	7/16	*2 1/2	5/8	1/2	.04	.21	4D
4E	7/16	1 3/4	13/16	5/16		.19	4E
5A	1/2	*4 3/8	1	1/2	.06	.17	5A
†5B	1/2	2 3/8	3/4	3/4		.21	†5B
5C	1/2	3 1/16	7/8	7/16		.14	5C
5D	1/2	*2 7/8	3/4[2]	13/16	.06	.19	5D
5E	1/2	*2 1/8	1 1/16	9/16	.06	.12	5E
5F	1/2	2 1/16	13/16	11/32		.14	5F
5G	1/2	*12	1	7/16	.06	.72	5G
6A	9/16	2	1 1/16	7/16		.13	6A
6B	9/16	1	7/8	11/16		.31	6B
6C	9/16	2 3/8	15/16	3/8		.27	6C
6 1/2A	5/8	4 5/16	7/8	5/16		.36	6 1/2A
7A	5/8	*2 3/8	1 1/8	15/32	.08	.16	7A
7B	5/8	*4 7/8	1 1/4	19/32	.08	.28	7B
7C	5/8	1 1/2	1 3/4	5/8		.35	7C
7D	5/8	*7 1/2	1 5/32	21/32	.08	.52	7D
7E	5/8	*5 7/8	1 1/8[3]	1 1/16	.08	.44	7E
7F	5/8	*4 1/2	1 7/16	11/16	.08	.43	7F
7G	5/8	2 5/16	1	7/16		.30	7G
7H	5/8	3	1 1/16	7/16		.26	7H
9A	3/4	*3 7/8	1 3/4	5/8	.08	.46	9A
9B	3/4	*4	1 1/2	13/16	.08	.37	9B
9C	3/4	*4 3/8	1 1/8	3/4	.08	.37	9C
9D	3/4	3 7/8	1 1/8	1/2		.24	9D
11A	7/8	*3 1/2	1 1/2	1 1/16	.10	.46	11A
11B	7/8	*4	2	15/16	.10	.64	11B
11C	7/8	4 3/4	1 7/16	5/8		.37	11C
11D	7/8	4 3/4	1 1/8	1 5/32		.55	11D
‡13A	1	*6	2 15/16	1 1/4	.12	1.50	‡13A
13B	1	*3 1/2	1 5/8	1 1/2	.12	.72	13B
13C	1	*3 1/2	1 15/32	1 1/8	.12	.63	13C
14A	1 1/16	*5 3/4	2 1/16	1 1/8	.12	.60	14A
15A	1 1/8	*5	1 13/16	1 1/8	.14	.92	15A
15B	1 1/8	*6	2 1/4	1 1/4	.14	1.51	15B
17A	1 1/4	*6	2 5/16	1 1/2	.16	1.60	17A
19A	1 3/8	*7 1/4	2 3/8	1 1/2	.18	1.72	19A

* Can be furnished longer if desired.

† Head off-set from center of shank 3/64 inch.

‡ Hole in head, 1 1/4 inch diameter.

1 Largest Diameter Head, 1 inch.

2 Largest Diameter Head, 1 1/8 inch.

3 Largest Diameter Head, 1 9/16 inch.

+"SUPERIOR" DROP-FORGED WRENCHES

(Carbon Steel)

For

WHITWORTH STANDARD AND METRIC MEASURE

NUMERICALLY ARRANGED

*Furnished from stock until supply is exhausted; thereafter on special order only.

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Pages 2 & 3		
MS000		5
MS000T		6
M00T		7
M00		8
W00	1/8	
M0T		9
M0		10
W0	3/16	
M1T		11
M1		12
W1	1/4	
M2T		13
M2		14
M2U		15
W2	5/16	
M3		16
M3U		17
M3T		18
W3	3/8	
M4T		19
M4		20
W4	7/16	
M5T		21
M5		22
W5	1/2	
M6T		23
M6U		24
M6		25
W6	9/16	
M7T		26
M7U		27
M7		28
W7	5/8	
M8U		29
M8		30
M8T		32
*M8X		33
W8	3/4	
M9U		34
M9		35
M9V		36

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 3 Cont'd		
M 9T		38
W 9	7/8	
M10		40
*M10V		41
M10T		42
W10	1	
M11		45
W11	1 1/8	
M12		50
W12	1 1/4	
W13	1 3/8	
W14	1 1/2	
*W15	1 5/8	
*W16	1 3/4	
*W16A	1 7/8	
*W17	2	
*W18	2 1/4	
*W19	2 1/2	
*W20	3	
See Page 4		
M21		6 & 8
M21T		7 & 9
M21U		8 & 10
W21	1/8 & 3/16	
M22		9 & 11
W22	1/8 & 1/4	
M23		10 & 12
M23T		11 & 13
W23	3/16 & 1/4	
W24	3/16 & 5/16	
M25T		12 & 13
M25		12 & 14
M25U		13 & 15
W25	1/4 & 5/16	
W26	1/4 & 3/8	
M27		14 & 16
M27T		15 & 16
M27U		15 & 17

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Pages 4 & 5		
W27	5/16 & 3/8	
M28		16 & 18
M28T		17 & 19
W28	5/16 & 7/16	
M29T		18 & 19
M29		18 & 20
W29	3/8 & 7/16	
M30		19 & 21
W30	3/8 & 1/2	
M31		20 & 22
M31T		21 & 23
W31	7/16 & 1/2	
M32T		22 & 24
M32		22 & 25
M32U		23 & 25
W32	7/16 & 9/16	
W33	1/2 & 9/16	
M34		23 & 27
M34T		24 & 26
M34U		25 & 27
W34	1/2 & 5/8	
M35		25 & 28
M34V		26 & 28
M35T		26 & 29
W35	9/16 & 5/8	
M36T		27 & 29
M36		28 & 30
M36U		29 & 32
W36	9/16 & 3/4	
M37		30 & 32
W37	5/8 & 3/4	
W38	5/8 & 7/8	
M39		32 & 35
W39	3/4 & 7/8	
M40		33 & 30
W40	3/4 & 1	
M41		38 & 40
M41T		38 & 42
W41	7/8 & 1	
W42	7/8 & 1 1/8	
M43		42 & 45

+ REGISTERED TRADE MARK

11-42

✦"SUPERIOR" DROP-FORGED WRENCHES

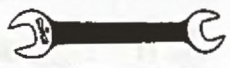
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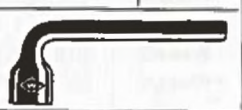
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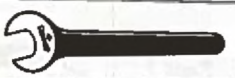
WHITWORTH STANDARD AND METRIC MEASURE

NUMERICALLY ARRANGED

*Furnished from stock until supply is exhausted; thereafter on special order only.

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 5 Cont'd		
W43	1 & 1 1/8	46 & 50
M44		
W44	1 & 1 1/4	
W45	1 1/8 & 1 1/4	
*W46	1 1/8 & 1 3/8	
M47		50 & 55
*W47	1 1/4 & 1 3/8	
*W48	1 1/4 & 1 1/2	
*W49	1 3/8 & 1 1/2	
*W51	1 1/2 & 1 5/8	
*W52	1 1/2 & 1 3/4	
*W53	1 5/8 & 1 3/4	
*W55	1 3/4 & 2	
*W56	1 3/4 & 2 1/4	
*W57	2 & 2 1/4	
See Page 13		
M75		10 & 12
W75	3/16 & 1/4	
*M77		13 & 16
*W77A	3/16 & 5/16	
W77D	1/4 & 5/16	
M79		14 & 16
*M79T		15 & 18
*M79U		16 & 19
*W79F	1/4 & 3/8	
W79D	5/16 & 3/8	
*W79G	5/16 & 7/16	
M81		18 & 20
*M81T		19 & 21
*M81U		20 & 22
W81F	3/8 & 7/16	
W81G	3/8 & 1/2	
*M83T		21 & 23
M83		22 & 25
W83E	7/16 & 1/2	
*W83F	7/16 & 9/16	
*W83G	1/2 & 9/16	
W83C	1/2 & 5/8	
M85		28 & 30
*W85D	9/16 & 5/8	
*W85E	9/16 & 3/4	
W85C	5/8 & 3/4	

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 18		
W201	1/4	
W202	5/16	
W203	3/8	
W204	7/16	
W205	1/2	
W207	5/8	
W208	3/4	
W209	7/8	
W210	1	
W211	1 1/8	
*W212	1 1/4	
See Page 26		
*W261A	1/8	
*W263A	3/16	
W264A	1/4	
W265A	5/16	
W267A	3/8	
W268A	7/16	
W269A	1/2	
W270A	9/16	
W271A	5/8	
W273A	3/4	
W275A	7/8	
W276A	1	
*W277A	1 1/8	
*W278A	1 1/4	
*W279A	1 3/8	
*W280A	1 1/2	
See Page 17		
	Open End; Closed End; Bolt Opening	
W563C	1/2—9/16	
W563D	1/2—5/8	
W564	5/8—5/8	

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 6		
M601		12
M601T		13
W601	1/4	
M602		14
M602T		15
*M602U		16
W602	5/16	
*M603		17
*M603T		18
*M603U		19
W603	3/8	
*M604		20
*M604T		21
W604	7/16	
*M605		22
*M605T		23
W605	1/2	
*W606	9/16	
W607	5/8	
W608	3/4	
W609	7/8	
W610	1	
See Page 46		
WE1-617	5/8	
WE1-620	3/4	
WE1-623	7/8	
WE1-626	1	
WE1-629	1 1/8	
WE1-632	1 1/4	
WE1-635	1 3/8	

✦ REGISTERED TRADE MARK

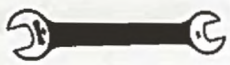
+"SUPERIOR"
DROP-FORGED WRENCHES
(Carbon Steel)

For

WHITWORTH STANDARD AND METRIC MEASURE

NUMERICALLY ARRANGED

*Furnished from stock until supply is exhausted; thereafter on special order only.

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 7		
M623		10 & 12
M623T		12 & 14
M623U		13 & 15
W623	3/16 & 1/4	
W624	3/16 & 5/16	
W625	1/4 & 5/16	
M626		14 & 16
M626T		16 & 18
W626	1/4 & 3/8	
W627	5/16 & 3/8	
W628	5/16 & 7/16	
M629		18 & 20
W629	3/8 & 7/16	
M628T		19 & 21
M630		20 & 22
M630T		21 & 23
M630U		22 & 25
W630	3/8 & 1/2	
W631	7/16 & 1/2	
W632	7/16 & 9/16	
*W633	1/2 & 9/16	
M634		23 & 27
M634T		24 & 26
W634	1/2 & 5/8	
M635T		26 & 29
M635		28 & 30
W635	9/16 & 5/8	
*W636	9/16 & 3/4	
W637	5/8 & 3/4	
W639	3/4 & 7/8	

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 12		
*W661B	1/8 & 1/4	
W661C	3/16 & 1/4	
*W662A	3/16 & 5/16	
*W662B	1/4 & 5/16	
*W662C	1/4 & 3/8	
W663A	5/16 & 3/8	
W663B	5/16 & 7/16	
W663C	3/8 & 7/16	
W664A	3/8 & 1/2	
W664B	7/16 & 1/2	
W664C	7/16 & 9/16	
*W665A	1/2 & 9/16	
W665B	1/2 & 5/8	
W665C	9/16 & 5/8	
*W666A	9/16 & 3/4	
W666B	5/8 & 3/4	
*W666C	5/8 & 7/8	
W667A	3/4 & 7/8	
*W667B	3/4 & 1	
*W667C	7/8 & 1	
*W668A	7/8 & 1 1/8	
See Page 14		
W760A	1/8 & 1/4	
W760B	3/16 & 1/4	
W760C	3/16 & 5/16	
W761A	1/4 & 5/16	
W761B	1/4 & 3/8	
W761C	5/16 & 3/8	
W762A	5/16 & 7/16	
W762B	3/8 & 7/16	
W762C	3/8 & 1/2	
W763A	7/16 & 1/2	

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 14 Cont'd		
*W763B	7/16 & 9/16	
W763C	1/2 & 9/16	
W764A	1/2 & 5/8	
W764B	9/16 & 5/8	
W764C	9/16 & 3/4	
W765A	5/8 & 3/4	
W765B	5/8 & 7/8	
W765C	3/4 & 7/8	
See Page 8		
*W801	1/4	
W802	5/16	
W803	3/8	
W804	7/16	
W805	1/2	
W806	9/16	
W807	5/8	
W808	3/4	
W809	7/8	
W810	1	
See Page 19		
W901	1/4	
*W902	5/16	
W903	3/8	
*W904	7/16	
W905	1/2	
W906	9/16	
W907	5/8	
W908	3/4	
W909	7/8	
W910	1	
*W910A	1 1/8	
*W911	1 1/8	
W912	1 1/4	

+ REGISTERED TRADE MARK

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+"SUPERIOR" and "SUPERRENCH"+

(Carbon Steel) *(Chrome-Moly.)*

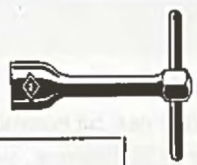
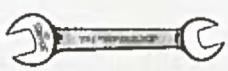
DROP-FORGED WRENCHES

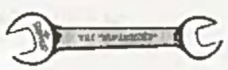
For

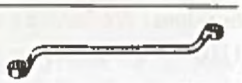
WHITWORTH STANDARD AND METRIC MEASURE

NUMERICALLY ARRANGED

*Furnished from stock until supply is exhausted; thereafter on special order only.

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 24		
*W961A	1/8	
W963A	3/16	
W964A	1/4	
W965A	5/16	
W967A	3/8	
W968A	7/16	
W969A	1/2	
*W970A	9/16	
W971A	5/8	
W973A	3/4	
W975A	7/8	
W976A	1	
*W977A	1 1/8	
*W978A	1 1/4	
*W979A	1 3/8	
*W980A	1 1/2	
See Page 32		
M1021		6 & 8
W1021	1/8 & 3/16	
W1022	1/8 & 1/4	
*M1021T		8 & 10
M1023		10 & 12
W1023	3/16 & 1/4	
*W1024	3/16 & 5/16	
*M1025T		12 & 13
M1025		12 & 14
W1025	1/4 & 5/16	
*W1026	1/4 & 3/8	
M1027		14 & 16
*M1027T		15 & 16
W1027	5/16 & 3/8	
M1028		16 & 18
W1028	5/16 & 7/16	
*M1029T		18 & 19
M1029		18 & 20
W1029	3/8 & 7/16	

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 32 Cont'd		
W1030	3/8 & 1/2	
M1031		20 & 22
*M1031T		21 & 23
W1031	7/16 & 1/2	
M1032		22 & 25
*W1032	7/16 & 9/16	
M1033		24 & 26
W1033	1/2 & 9/16	
*M1034		23 & 27
W1034	1/2 & 5/8	
M1035		25 & 28
*W1035	9/16 & 5/8	
*M1036		28 & 30
*W1036	9/16 & 3/4	
*M1037		30 & 32
W1037	5/8 & 3/4	
See Page 34		
W1075	3/16 & 1/4	
*W1077A	3/16 & 5/16	
*W1077D	1/4 & 5/16	
*W1079F	1/4 & 3/8	
*W1079D	5/16 & 3/8	
*W1079G	5/16 & 7/16	
*W1081F	3/8 & 7/16	
W1081G	3/8 & 1/2	
*W1083E	7/16 & 1/2	
*W1083F	7/16 & 9/16	
*W1083G	1/2 & 9/16	
*W1083C	1/2 & 5/8	
*W1085D	9/16 & 5/8	
*W1085E	9/16 & 3/4	
*W1085C	5/8 & 3/4	

No.	Whitworth Std. Nuts; Size Bolts	Metric Openings; m/m
See Page 41		
Whitworth sizes on application.		
See Page 35		
*W1203	3/8	
*W1205	1/2	
*W1207	5/8	
*W1208	3/4	
*W1209	7/8	
*W1210	1	
See Page 35		
*W1903	3/8	
*W1905	1/2	
*W1907	5/8	
*W1908	3/4	
*W1909	7/8	
*W1910	1	
See Page 38		
Whitworth sizes on application.		
See Page 39		
W8029	3/8 & 7/16	
W8033C	1/2 & 9/16	
W8723	1/8 & 3/16	
W8727	1/4 & 5/16	

+ REGISTERED TRADE MARK

DROP-FORGINGS TO ORDER

Drop-forgings are used in vast quantities for a wide variety of mechanical purposes. They are made of steel, bronze, copper, iron and many other metals.

Their quality depends upon the material and the care and skill used in their manufacture. Our Chemical Laboratory checks all material as received; our Physical Laboratory tests forgings while in process and upon completion; our skill has been developed by half-a-century's experience in producing our standard stock tools and innumerable special designs to order.

MATERIAL

The material usually employed in making drop-forgings is bar steel. By carrying thousands of tons of assorted grades, shapes and sizes, many orders for drop-forgings can be completed without waiting to obtain the material. This is often a great convenience to our customers, particularly in the case of new dies, where the correct size of metal required cannot always be definitely determined until the tools are completed and tried.

DIES

Our facilities for sinking drop-forging dies, from the smallest, weighing only a few pounds, to massive blocks of several tons weight each, are unexcelled. Charges, when made for the use of dies, include but a portion of their cost and do not convey the right of removal from our works. We assume the risk and expense of their breakage and maintenance; the customer controls their use, as we will not make forgings from them without his written authority.

ESTIMATES

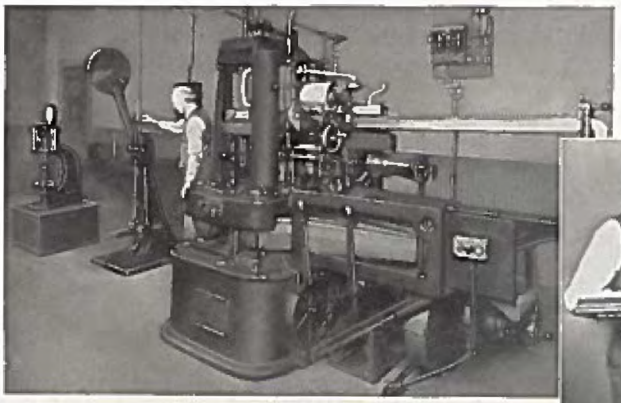
Dies are made to conform to a drawing; they usually differ from the finished part by the addition of the stock for removal in finishing and by the necessary draft, or taper, to permit drawing the forgings from them. Draft is seldom less than seven degrees—frequently it is more. Before sinking dies, we always submit to the customer for approval, a blue print showing the addition of the stock to be removed in finishing and the draft, with such other modifications as may be necessary.

When estimates are desired, therefore, send us a model, or drawing, of the part and state whether it shows "forging size" or "finished size," the quantity of forgings wanted and the material of which they are to be made. If the model, or drawings shows "finished size," tell us what surfaces are to be finished. We usually add at least 1/32 inch on each surface to be machined. On large forgings we add 1/16 to 1/8 inch; on small pieces, requiring only grinding or polishing, 1/100 inch is allowed.

The price of drop-forgings is largely affected by the quantity made with one setting of the tools; it costs as much to set dies for 100 as for 1000 pieces, and the forging work is also more costly per unit in small lots. Prices for drop-forgings vary with the nature of the work, the material used, the heat treatment if any, and the quantity taken at one time.

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DROP-FORGINGS TO ORDER











These illustrations show general views of our Physical and Chemical Laboratories, and the Die Sinking Department.

DROP-FORGINGS TO ORDER

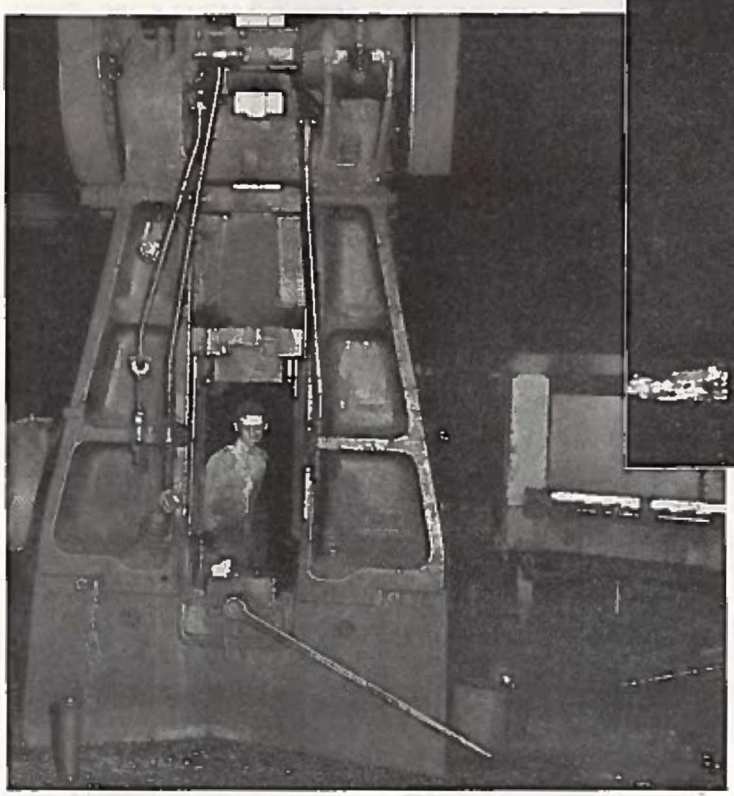
EQUIPMENT

Our forging equipment consists of Board Drops from 400 to 4,000 lbs., Steam Drops from 2,500 to 8,000 lbs., Steam Hammers, Trip Hammers, Upsetting Machines (sometimes called "Headers"),

(Continued on next page)





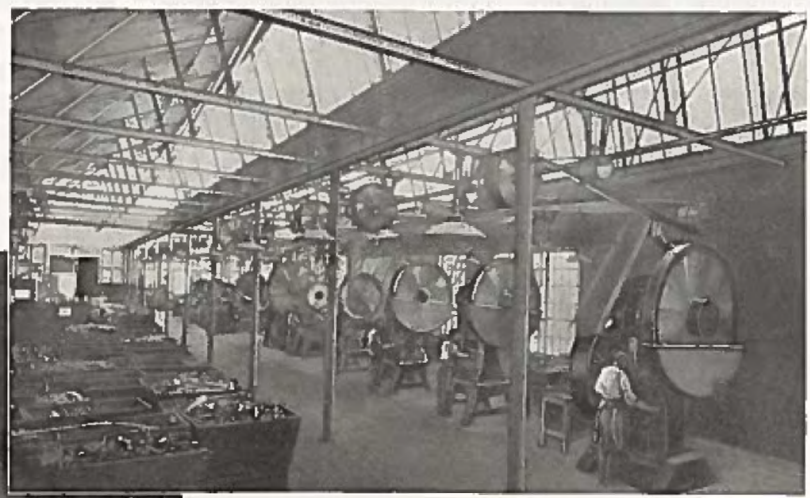


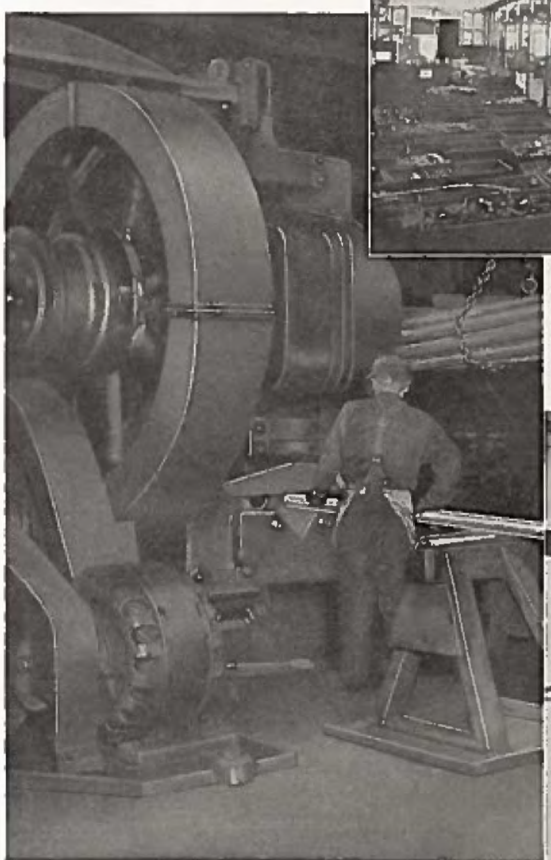
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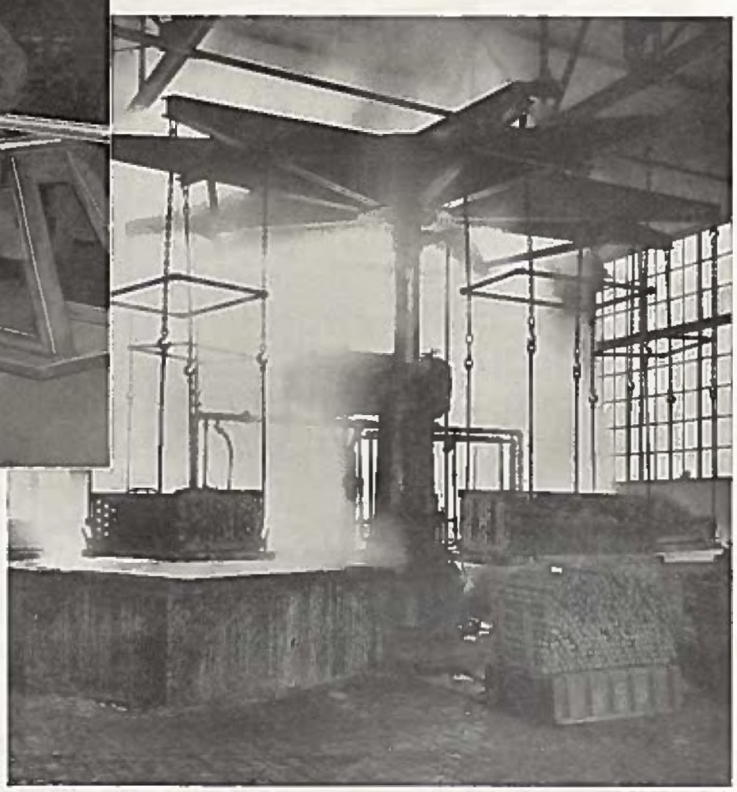
DROP-FORGINGS TO ORDER

EQUIPMENT (Continued)

Coining Presses, Hydraulic Presses, Electric Welding Machines, Rolls, Shears, Cold Sawing Machines, Shot-blasting Machines, Pickling Machines, etc., etc.



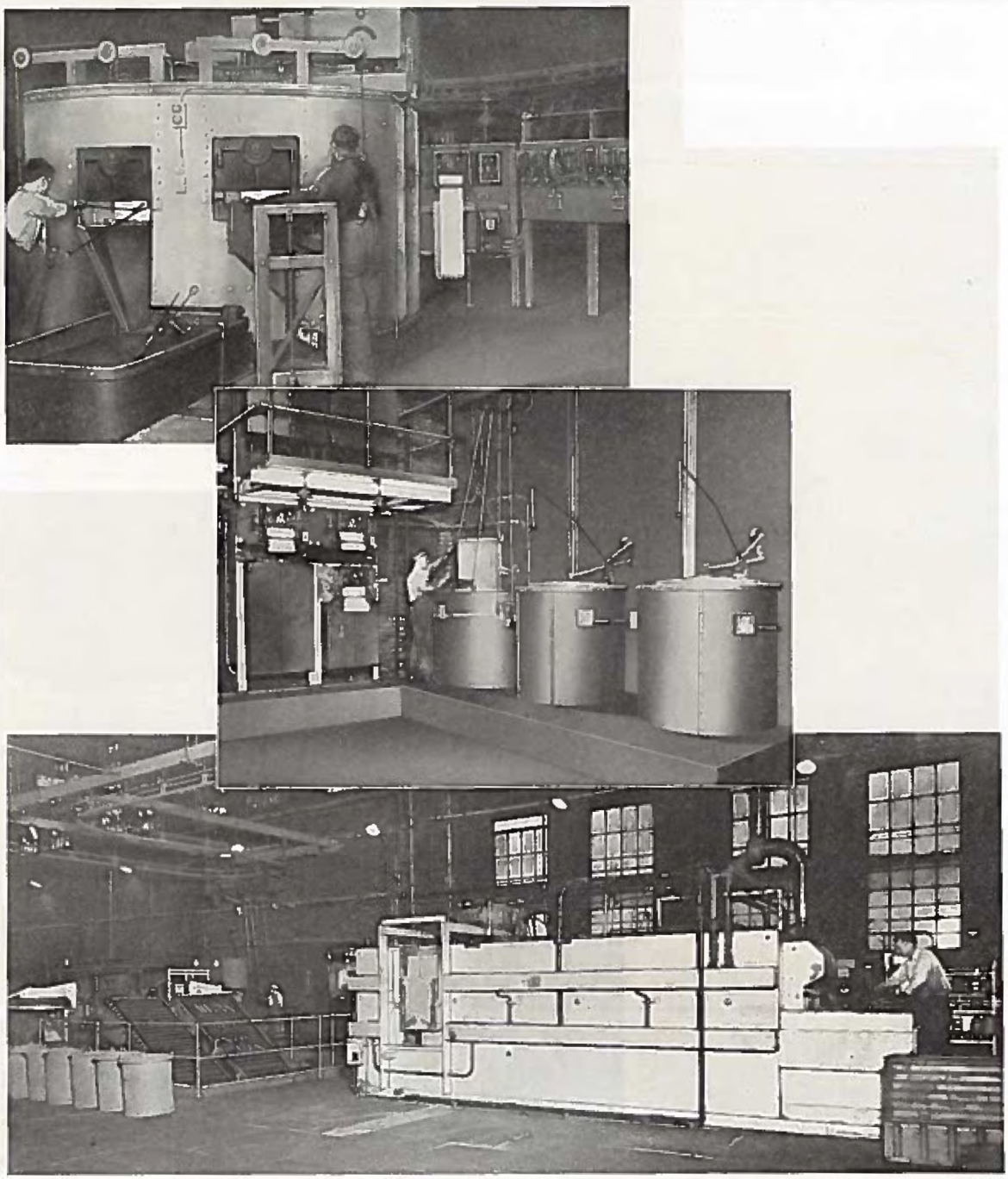




DROP-FORGINGS TO ORDER

HEAT TREATMENT

Our Heat-treating facilities are modern and complete. We have electric furnaces, both rotary with automatic temperature control, conveyor type with controlled atmosphere, and Homo electric furnaces and oil-fired furnaces of large capacity, all equipped with recording pyrometers. Methods and processes are all specified and controlled by our Metallurgical Department.



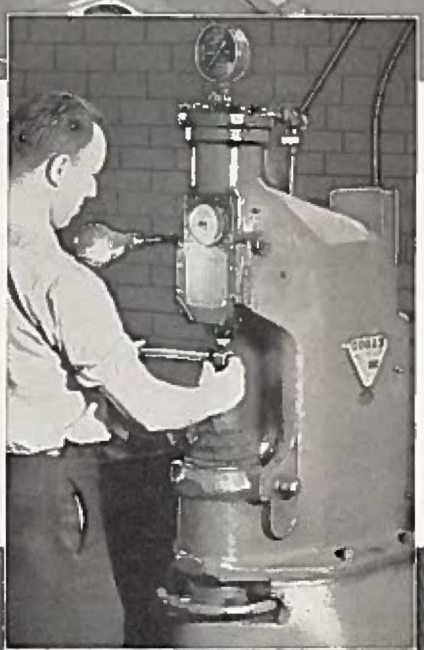
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INSPECTION

All of our products are carefully inspected by experienced men in our Inspection Department where the most modern types of testing equipment are used to insure none but forgings correct to specifications leaving our plant.







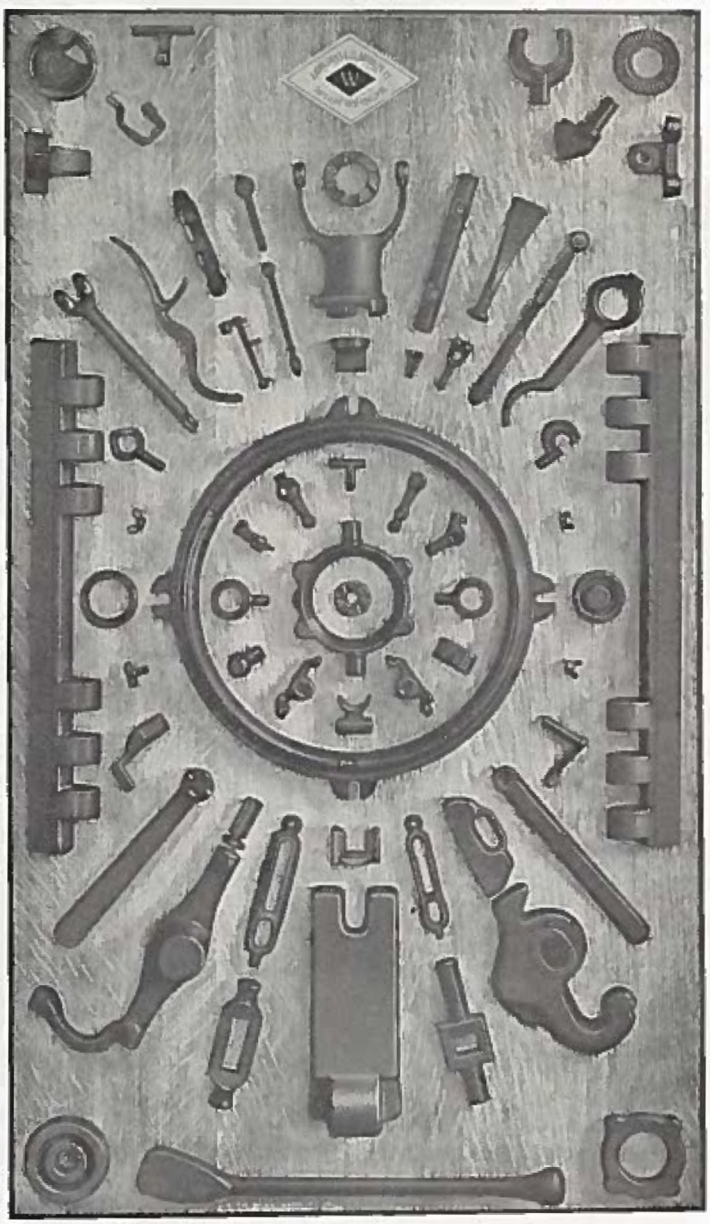


GUARANTEE

We guarantee all forgings to be free from imperfections of workmanship and material. We will gladly replace, without charge, any which prove defective, but we cannot allow claims for labor, or damages.

SUPERIOR
DROP-FORGINGS TO ORDER

Illustrations of Drop-forgings made to order; not for sale from stock



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SUPERIOR
DROP-FORGINGS TO ORDER

Illustrations of Drop-forgings made to order; not for sale from stock

